Technical Manual

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1	12-98	Initial Release
1a	9-02	Statements have been added for clarification purposes.
2.0	5-04	» Voice Messaging illustration on *page 3-3* has been revised. » Formatting changes have been applied. » Product name was changed to: Vodavi TalkPath Voice Processing System.

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1 Introduction

Overview

The *Talkpath* Voice Processing System is a standalone, compact, full-featured PC-compatible voicemail system that supports one company. It is a self-contained system, designed for easy installation.

The *Talkpath* Voice Processing System unit connects directly to the following Vodavi phone systems:

- DVX*Plus* **Mach I**
- DVX*Plus* **II**
- DVX*Plus* **III**
- DVX*Plus* **IV**

Quick Start

To install the *Talkpath* Voice Processing System as quickly as possible, follow these steps:

1. Hardware Installation:

   See Section 2 for instructions on unpacking , installing, and phone system requirements for the *Talkpath* Voice Processing System unit.

2. Select Phone System:

   The *Talkpath* Voice Processing System must be configured for your particular phone system. There are two configuration methods:

   - Telephone-based administration (see *Section 4*).
   - Laptop/PC-based administration (see *Section 5*).

3. Set the Date and Time:

   Refer to *Section 4* or *Section 5* for instructions on setting the *Talkpath* Voice Processing System date and time.

System Unit

The following graphic shows the front and back panels of the *Talkpath* Voice Processing System.

- When lit, the red LEDs on the front panel indicate system status, port configuration, and boot sequence.

If the LEDs do not match the port count, refer to Section 7 Technical / Troubleshooting

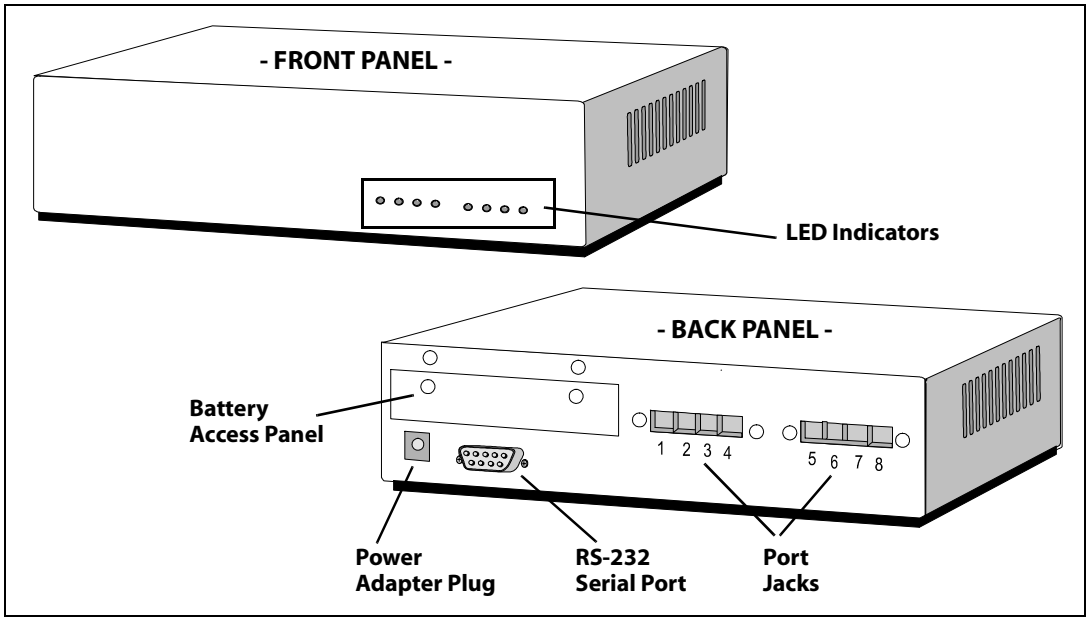


Figure 1-1. Voice Processing System - Front & Back Panels

- The AC adapter supplied with the system connects to AC power. The RS-232 serial port is available to connect to a PC, laptop or a customer provided 9600 bps or better modem.
- Four or eight line connectors connect the *Talkpath* Voice Processing System to a supported phone system. On 2-port systems, there are four jacks: 1 and 2 are active, jacks 3 and 4 are inactive. On 6-port systems: jacks 1-6 are active, jacks 7 and 8 are inactive.

For the unit to operate, port 1 MUST be connected.

Plugging a single line port into the Digital voicemail system can damage the equipment

- The battery compartment holds eight AA alkaline batteries that retain the system clock in case of a power failure (batteries are not included).

Product Features

The *Talkpath* Voice Processing Systems contain a rich feature set and has high storage capacity. It is wall-mountable and completely self-contained (no monitor or keyboard required). *Talkpath* Systems also feature laptop/PC administration through a serial port, and modem support for remote administration. An external modem must be provided by the customer.

Benefits of the *Talkpath* Voice Processing System include:

- ❒ Economical compared to conventional PC platforms
- ❒ Pre-configured software saves installation and setup time

The *Talkpath* Systems are equipped with 8 LED indicators. When the system is on, these lights are lit. When operating correctly, the number of lit LED indicators corresponds to the port size (e.g., 6 LEDs for a 6-port, 2 LEDs for a 2-port, etc.) When a call comes in, the line handling the call blinks, then lights steady again when the call terminates.

Digital Voicemail Features

Digital system features also include:

- ❒ Reduced equipment costs by eliminating SLT equipment requirement
- ❒ The telephone system and voicemail system have date/time synchronization.

  The voicemail system requests the date and time from the telephone system. If the voicemail system is more than the value of the Registry parameter DVMTimeDiff minutes out of sync with the telephone system, the voicemail system adjusts the date and time. The system then shuts down and restarts with the new date and time. The default value for DVMTimeDiff is 00:05:00 or 5 minutes.

  The telephone system displays the number of messages in a mailbox. On a display phone, the system shows the number of urgent new, new and saved messages. The display shows:

  ```
  VM MESSAGES XXX-YYY-ZZZ
  11/28/05            04:00a
  ```

  Where:
  XXX = number of new urgent messages
  YYY = number of new messages
  ZZZ = number of saved messages
- ❒ *One Touch Record* or *Record on the Fly* provides a means of recording telephone conversations into your voicemailbox.
- ❒ Answering machine emulation monitors a caller recording a voicemail message into a mailbox. While the caller is recording, you may connect to them or let them finish leaving the messsage undisturbed.

- Caller ID/ANI information displays on the telephone display as each message plays and remains with voicemail messages. When retrieving the message, press [60] to dial the number with the voicemail message. When caller ID/ANI is available, the display shows:

  ```
  XXX-XXX-XXXX
  YYYYY
  ```

  xxx-xxx-xxxx = telephone number & yyyyy = name associated with the telephone number

  When there is no caller ID/ANI information, the display shows:

  ```
  Outside Call
  ```

- Smart Transfer features let the system quickly determine if a station is Busy, Do Not Disturb, or Out of Service. This transfers calls quickly and efficiently, routing the caller to the correct location.
- Park and Page features provides a means to let external callers reaching a mailbox be placed into a system park location, then have the voicemail system places an external page to announce the holding party.

Company Contact

This section contains product support information. Please use this information to contact Vodavi Communications Systems.

E-Mail Support

For e-mail support, contact our technical services department.

Phone Support

If you encounter a problem you cannot solve, call Vodavi Communications Systems Technical Support, Monday through Friday, during the hours of 6:00 am - 5:00 p.m. PT. Follow the instructions to reach the appropriate support department.

Fax Support

Use our fax line for sending registration or support information.

Product Replacement Program

Should the *Talkpath* Voice Processing System be found defective in materials or workmanship as stated in the Limited Product Warranty, please contact Vodavi Communications Systems, Inc. for a return authorization. You will then receive a return authorization number and instructions on returning the defective product for replacement.

FCC Information

User Responsibility

Should the need arise in the future, the telephone company will call the user and request the following information for any terminal equipment being connected to the Public Switched Telephone Network:

Information For This Equipment

Manufacturer: Vodavi Communications Systems, Inc.

- Model Number: (unit label)
  OKT-2(2 port)
  OKT-4 (4 port)
  OKT-6 (6 port)
  OKT-8(8 port)
- These units have passed and are in compliance with FCC regulation CFR47 Part 15.
- Jack(s) that may be used with the unit: RJ-11

Registration

Note that FCC registration does not constitute an expressed or implied performance guarantee. Only the manufacturer's warranty set forth in this booklet covers the unit performance.

Telephone Company Rights and Responsibilities

If your unit causes harm to the Telephone Network, the telephone company may discontinue your service temporarily. If possible, they notify you in advance. But, if advance notice is not practical, you are notified as soon as possible. You have the opportunity to correct the situation and you will be informed of your right to file a complaint with the FCC.

Your telephone company may make changes in its facilities, equipment, operation, or procedures that could affect the proper functioning of your unit. If they do, you will receive advanced notification so you may maintain uninterrupted service.

Repair Instructions

If you experience trouble with the unit, follow the procedure below:

Determine whether the problem is with your unit. If the problem is in your unit, refer to these guidelines for obtaining service:

- ❒ If the unit is covered by the manufacturer's warranty, follow the procedure set forth in the warranty (purchaser's responsibility) for obtaining repair or unit replacement.
- ❒ If the unit is no longer covered by the manufacturer's warranty, you may return the unit to the manufacturer for repair or refurbishment. You are billed for any repairs. Manufacturer's policy and procedure on repair and refurbishment is available upon request by writing or calling:

  Vodavi Communications Systems, Inc.
  4717 East Hilton Avenue
  Phoenix, AZ 85034
  MRA: 800-825-4020
  FAX: (602)443-6102

Repair to this equipment can be made only by the above manufacturer and its authorized agents, and by others who may be authorized by the FCC. Any product received without the MRA number and proper paperwork will be returned freight collect. Call or fax us for a return authorization number.

2 Installation

Hardware Requirements

To install the *Talkpath* Voice Processing System, the following hardware is required:

- ❒ 4 6/32 x 1 inch long screws (1 inch long #6 wood screws may also be used) and the applicable wall anchors to mount the voice processing system to the wall.
- ❒ Screwdriver
- ❒ Phone switch
- ❒ Power connector supplying 110V AC
- ❒ 8 AA alkaline batteries (not supplied)

Unpacking Unit

When unpacking the unit, be sure you have:

- ❒ *Talkpath* Voice Processing System unit
- ❒ Power supply

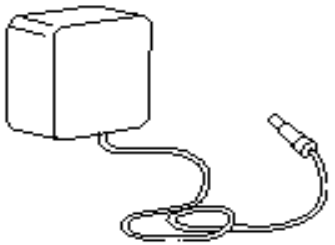


Figure 2-1. Low Voltage Power Supply

- ❒ Windows Administration diskette
- ❒ 9-pin null modem cable for laptop/PC administration
- ❒ *Talkpath* Voice Processing System manual

Hardware Installation

Installing Batteries

Vodavi suggests installing eight AA alkaline batteries so if power is shut off, the system properly retains the date and time. In an unpowered unit, the eight AA alkaline batteries last approximately eight weeks. In a powered unit, they remain unaffected.

The battery compartment has pull-tabs attached. Pull them to open the battery compartment. With the battery tray open, insert the batteries, slide the tray in, then snap the tabs shut.

Installing the batteries in the Digital Voice Processing System unit incorrectly can cause permanent damage to the unit.

Vodavi has made every reasonable effort to ensure that this product works in most business environments. However, there may be some environments (RFI and EFI) in which this product may not work properly. In such cases, it is the responsibility of the installer to take the necessary actions to correct the situation.

Placement and Mounting

Place the *Talkpath* Voice Processing System on any sturdy, flat surface, or wall mount it using the screw slots located on the bottom of the unit. Wall mounting is preferred for safety reasons. The units can be stacked.

Unit must be oriented with ventilation slots on top and bottom. Screw slots allow one orientation. Position the unit so the LEDs are not blocked from view. If a console or PC is permanently connected, a screw-lock connector is recommended.

For wall mounting, two upper holes and two lower holes are 8 3/8 inches apart, and the distance between the upper and lower holes is 12 1/2 inches. Mount the screws to the wall first, then position the voice processing system unit onto the screws. Insert the screws far enough into the wall far enough that when the unit is mounted onto them and slid down, the unit holds securely and safely to the wall. Do NOT open the case to tighten the screws because the lid cannot be reinstalled.

Do NOT move or mount the system while it is powered. Make sure there is two inches of free space all around the unit to provide adequate ventilation.

The figure below shows the Digital Voice Processing System unit mounted on the wall.

Figure 2-2. Wall Mounted Digital Voice Processing System

Connecting Phone Lines

Connect the phone lines by plugging each line into an RJ-11 jack, the same as with a digital station. This can be done whether the *Talkpath* Voice Processing System unit is on or off.

Connect all voicemail ports to digital ports on the phone systems. Voicemail port 1 ***must*** be connected to the system for the system to operate. The last active voicemail port must be connected so Message Waiting Indicators (MWI) and notifications are available. Connect the digital phone lines to voicemail before powering on the voicemail unit.

Do not connect analog phone lines to the Digital voicemail because equipment failure can occur.

Ports can be installed after the system is booted, but two calls must be placed to that port before it will answer. It is suggested to reboot the system to activate each additional port.

The unit has four or eight RJ-11 line connectors on the back, but only the number of ports ordered are active.

Connecting Serial Cable or Modem

When connecting the Digital Voice Processing System directly (or locally), use the console connection at the rear of the Digital Voice Processing System to connect the supplied 9-pin null modem cable to the laptop/PC.

If attaching a modem to the Digital Voice Processing System, you must supply the necessary straight-through, 9-pin to 25-pin cable to match the modem. When connecting cables, treat the Digital Voice Processing System as a PC or other DTE device.

The modem attached to the TalkPath Voice Processing System must have DIP switches that allow setting it for auto-answer and suppress result codes. To work with the TalkPath Voice Processing System, the modem MUST have switches that allow setting of these two features.

Connecting Power

When installing, the Digital Voice Processing System, connect the 18V AC power supply from the unit to a dedicated 120V AC, 60 Hz grounded power outlet, as shown in Figure 2-1. When the unit is ready to answer, the number of LED indicators corresponds to the port size (e.g., 6 LEDs for a 6-port, 2 LEDs for a 2-port, etc.) If, after 2-3 minutes, there are any other LEDs lit, refer to the Technical/Troubleshooting discussion in Section Section 7.

Some considerations when connecting the Digital Voice Processing System:

- ❒ Do not make phone line connections during a lightning storm.
- ❒ Only use the power supply that came with Digital Voice Processing System. Other power supplies could damage the system.
- ❒ Be sure to route the connecting cables so they are free of tension.
- ❒ Connect the digital phone lines to the voicemail before powering on the voicemail unit.

Selecting Phone System Integration

Table 1 lists the available Vodavi phone systems, with their corresponding phone system number and the section in which they appear in this manual.

You may use laptop/PC administration or telephone-based administration to configure the Digital Voice Processing System.

After setting up the phone system, the voicemail must be set up to match the phone system to which you are connecting. The default phone system setting is: 000 (3 digits, blind transfers).

Change the phone system setting using Laptop Administration (see *Section 5*) or using the phone (see *Section 4*). You can select the desired phone system by entering the 3-digit number of the phone system configuration file to load.

To select a phone system via telephone-based administration, follow these steps:

1. Dial any extension number connected to the voicemail system, not the voicemail hunt grp.
2. The system answers with:

   Thank you for calling. If you know your party's extension, you may dial it now. If you know your party's name but not their extension, please dial [4]. To reach an operator, dial [0] or remain on the line. To listen to the instructions again, dial [✳].

   If the system is in night mode, it plays:

   Thank you for calling. Our offices are closed. Please call back at a later time.

   If the menu greeting was re-recorded, a different prompt plays.
3. To access voicemail, press [7].
4. Enter mailbox number 100.
5. Press [✳] followed by the password for the mailbox. The default password is 0000.
6. Press [7] to access administrator functions. If the mailbox is not in the supervisor Class of Service, the system prompts for the administrator password. The administrator password (default is 2275) must be entered within 3 seconds.
7. Press [8] for system administration.
8. Press [2] to select a phone system.
9. The system then prompts for a phone system number. Select the number for the system that best matches your phone system from Table 1.
10. The system confirms your input, then resets.
11. Once the system restarts, Voice Processing System is configured for your phone system.

After selecting a phone system, the next step is to set the date and time on the Digital Voice Processing System. Refer to *Section 4*.

Vodavi Phone Systems

Below is a table of the phone systems that are compatible with the Digital Voice Processing System, along with the identification number for each phone system.

Vodavi Phone System Name	Number
Default (3 digits, blind transfer)	000
DVX*Plus* **Mach I** (3-digit extensions)	903
DVX*Plus* **II** (3-digit extensions)	900
DVX*Plus* **III** (3-digit extensions)	901
DVX*Plus* **IV** (3-digit extensions)	902
DVX*Plus* **Mach I** (4-digit extensions)	913
DVX*Plus* **II** (4-digit extensions)	910
DVX*Plus* **III** (4-digit extensions)	911
DVX*Plus* **IV** (4-digit extensions)	912

Table 2-1. Vodavi Phone Systems

Phone System Requirements

Listed below are the phone system requirements for voicemail systems:

- ❒ A digital port for each voicemail port purchased. For example, a 6-port voicemail system requires six digital ports.
- ❒ Phone system software 1.36 or higher

  Verify that the phone system software is version 1.36 or higher. To determine the version, dial [605] from the first programmed attendant station. The following message displays on the display phone:

  ```
  Eng. Ver. X.XX-YYYY
  VODAVI ALL          HH:MM
  ```

  Where:

  X.XX = version number
  HH:MM = the current time

Phone System Programming and Voicemail Setup

Follow these steps to program the phone system:

1. Determine the extensions connected to the voicemail system.
2. Go to station 100 for programming.
3. Enter Admin Mode by dialing [✳✳3226].
4. Program the system date and time:
   a. Press [Flash 11]. The following message displays:

   ```
   DATE & TIME
   MMM DD YY              HH:MM
   ```

   b. Choose the display format by pressing the appropriate flexible button.
   [Button 1] LED Off = 12 hour display format
   [Button 1] LED On = 24 hour display format
   c. Enter the date and time: YYMMDDHHMMSS (military format).
   d. Press [HOLD].
5. Program the Voicemail Group:
   a. Press [Flash65, button 1]. The following message displays:

   ```
   VM 440 AAA LLL R XXX,XXX,
   XXX,XXX,XXX,XXX,XXX,XXX
   ```

   Where:

   AAA = Alternate Group
   LLL = Leave Mail Index
   R = Retrieve mail index from out pulsing table for retrieving messages 0-7
   XXX = Voicemail Station Numbers (ports), up to 8 stations maximum in each group

   b. Press [Button 12].
   c. Enter the 3-digit station numbers. A maximum of eight stations can be entered.
6. Enable ICLID if feature is installed on the phone system. Otherwise, skip to the next step.
   a. Press [Flash 56, button 1].
   b. Press [HOLD] to save.

7 Program CO Line Ringing Assignments to ring CO lines directly to voicemail, if necessary.
   a Press [Flash 40].
   b Enter the CO line range (CO line numbers are 3 digits in length).
   c Press [HOLD].
   d Press [Button 10]. The following displays:

```
RING ASSIGNMENTS
ENTER DDDR
```

   e Dial [4407].
   f Press [HOLD] to save.
8 Plug the voicemail ports into the digital voicemail.
9 Apply power to the voicemail unit.

Voicemail ports must be plugged into the digital voicemail system to allow boot up.

10 Program the voicemail system to match the phone system type. Refer to the Voicemail Administration manual for instructions.
11 Configure Subscriber, Menu, Class of Service, Time Control, and Voice Line settings through laptop/PC administration. Refer to *Section 5*.

Optional Station Programming

Perform the following steps to program the stations:

1 Enable Call Forwarding on the station if using the voicemail Blind Transfer option.
   a Lift handset or press [ON/OFF].
   b Press the FWD button
   c [7] = no answer calls
   d [8] = busy calls
   e [9] = busy and no answer calls
   f Dial [440]. A confirmation tone is heard.
   g Replace the handset or press [ON/OFF].

2 Program the One Touch Record Begin Button.
   a Press [SPEED] twice.
   b Press the flexible button to program.
   c Press [649440]. A confirmation tone is heard.
   d Press [ON/OFF].

3 Program the Record Pause/Resume Button.
   a Press [SPEED] twice.
   b Press the flexible button to program.
   c Press [655]. A confirmation tone is heard.
   d Press [ON/OFF].

4 Program answering machine emulation button.
   a Press [SPEED] twice.
   b Press the flexible button to program.
   c Press [654X]. A confirmation tone is heard.
   Where X is:
   [1] = Speaker Mode
   [0] = Ring Mode

3 Feature Operation

Overview

The Digital Voice Processing System is a stand-alone, compact, full-featured PC-compatible Voicemail System. It is a self-contained system, designed for easy installation.

Introduction

The Digital Voice Processing System is a powerful tool for telephone automation. With it, you can:

- Receive voice messages
- Send voice messages
- Record a personal greeting
- Verify the date and time a message was sent
- Screen incoming calls
- Be notified of an important message any time, any place
- Let a calling party wait on hold
- One-touch recording
- LCD-based caller information

Use this guide to learn how to use the Digital Voice Processing System features. The guide covers:

- The features and their use
- How to access features
- How to change feature settings

Voice prompts and menu help systems guide you through the operation of all the features. The menu-driven Digital Voice Processing System is easy to use. By taking the time to read this manual, you may maximize the capabilities of this system.

The system administrator may not have activated all the features described in this manual and, therefore, some may be inaccessible. Check with the system administrator to determine which features are available on your system.

Some Basics

A menu is a group of features or selections. Access features by pressing [0-9], [#], or [✳] from the dialpad of any touch-tone telephone. Menus are connected in a *tree structure*, that is, general topics are divided into more specific areas. For example, when you dial your mailbox number the menu prompts, *Press [1] to retrieve messages. Press [2] to send a message. Press [8] for personal options. These selections are general topics that deal with a number of feature settings. Select [8] personal options, to hear the following: Press [1] to edit greeting. Press [2] to change your password...*

Special keys include [✳] which replays the current menu selections, [#] which takes you back to the previous menu, and [9] which hangs up or disconnects from the Digital Voice Processing system. [✳] is also used at specific points in the program to gain access to system features.

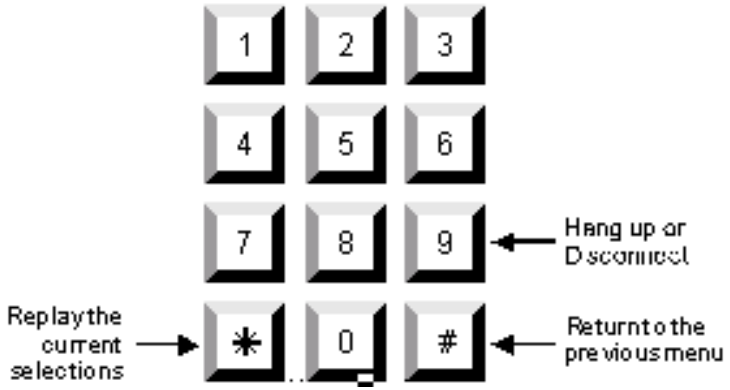


Figure 3-1. Special Keys

As a new user, press [✳] often to replay the menu selections and become familiar with the system. Experienced users may not want to listen to the menu selections. In that case, the Type Ahead feature overrides voice prompts and lets users enter a string of keys that directly accesses the desired voicemail feature.

Getting Started

Before going further, gather the following information:

- ❒ The internal or external phone number to access the Digital Voice Processing System.
- ❒ Your mailbox number.
- ❒ Your extension number.
- ❒ Your password.

Voice Messaging Operation

Voice Messaging lets users send and receive voice messages. This eliminates telephone tag and increases productivity. The following illustration shows the menu structure for voice messaging.

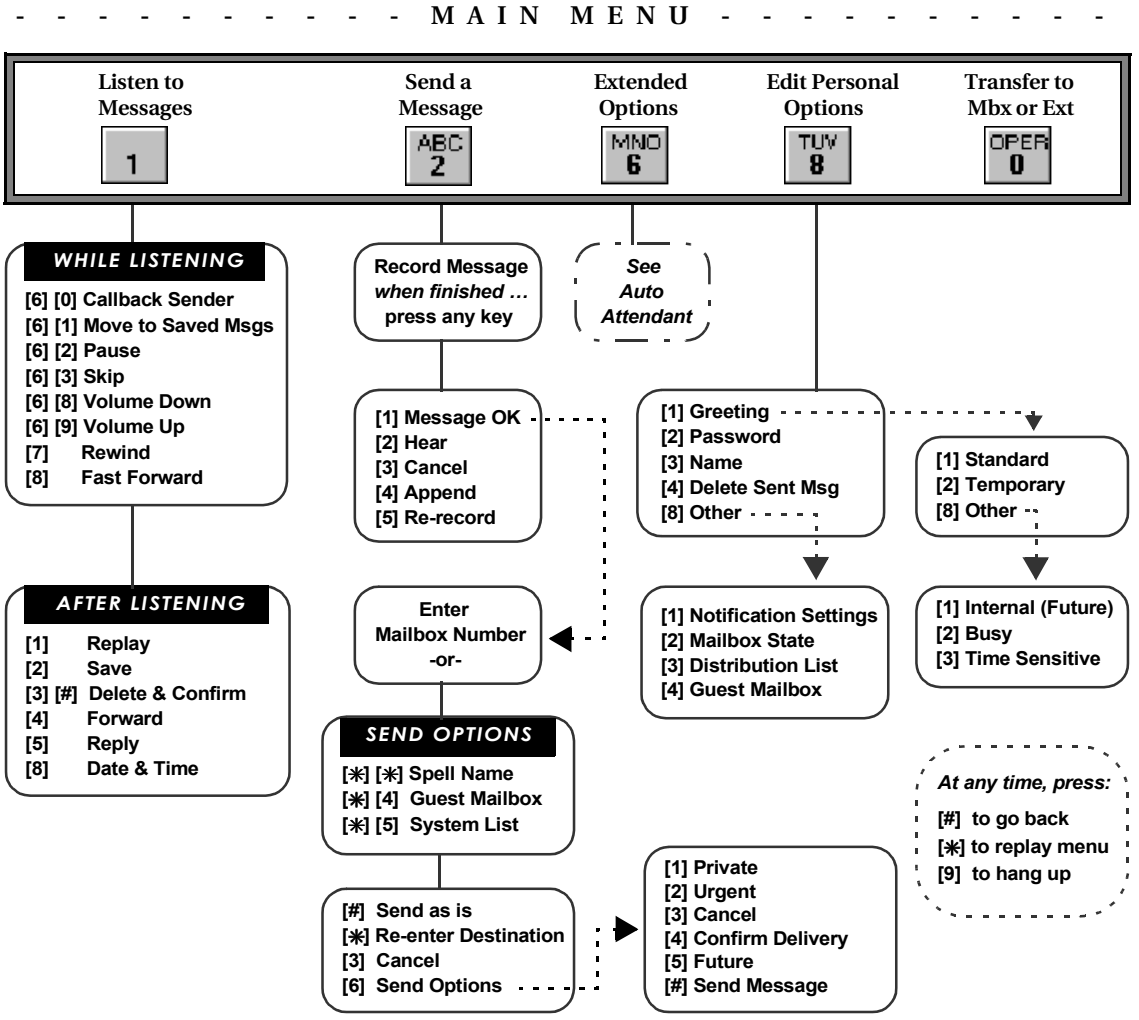


Figure 3-2. Voice Message Menu Structure

System Access

1. Access your mailbox:
a) Internally - dial your extension
b) Externally - dial your phone number
2. Press
when voicemail answers.
3. Enter your password:

Figure 3-3. System Access

To access the system:

1 Dial the internal extension or outside phone number of the Digital Voice Processing System. Once connected, the system prompts you with a greeting similar to the following, *The office is now closed. Please try your call again later.*

2 Enter your mailbox number.

3 Press [✳] to access your mailbox. The system responds with: *Please enter your password.*

[✳] is the default key set at the factory. The system administrator may have changed this key.

4 Enter your password.

The System Administrator initially sets the password. The default password is 0000. Once a user accesses their mailbox the system always plays a message with the number of messages, the number of new messages and the number of saved messages. For example: *You have two new messages and three saved messages*. The next set of messages are:

- ❒ Press [1] to retrieve messages
- ❒ Press [2] to send a message
- ❒ Press [8] for personal options
- ❒ Press [6] for extended personal options
- ❒ Press [0] to transfer to a mailbox or extension

If there are no messages, the system prompts:

- Press [2] to send a message
- Press [8] for personal options
- Press [6] for extended personal options
- Press [0] to transfer to a mailbox or extension

New users must:

1. Record their name as the owner of this mailbox
2. Change the security code
3. Record a personal greeting

The System Administrator can enable a First Time Help feature that guides users through recording their name, changing their password and recording a greeting. Users can change any of these options at any time.

Smart Prompts

Smart prompting is the ability to provide prompts for available features to the user. These prompts play only when the feature is enabled by the system administrator.

The following options are available to mailbox owners if they were activated in Class Of Service. Refer to *Section 5*.

Record Name

Recording names for each mailbox provides the mailbox with a personalized identity. For example, when a voice mailbox (VM) user leaves a message they hear the following prompt, *Message will be sent to (Name)*. This gives the caller a confirmation that the message was sent to the correct person. Confirmation is especially useful if the message was sent using the spell by name feature. If a name is not recorded the caller hears *Message will be sent to mailbox XXXX*.

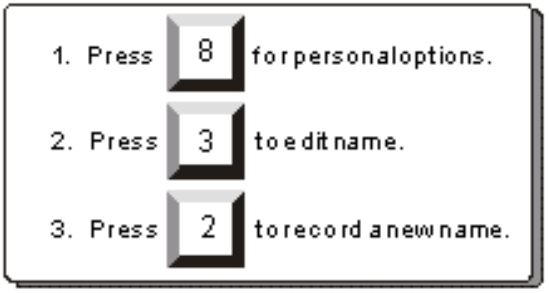


Figure 3-4. Record a Name

To record a name:

1 Press [8] for personal options
2 Press [3] for name option
3 Press [2] to record your name

Once the name is recorded:

1 Press [1] to listen to the current name
2 Press [2] to record again
3 Press [#] when finished recording

Password

To keep messages confidential and prevent unauthorized use of a mailbox, change the password. The password can be changed as often as needed.

The password is a four digit number, unless the System Administrator sets a different number. Select a code that is easy to remember but is not obvious. For example, do not use 5555. However, the first four digits of a home telephone number might work well. If the code is forgotten, the administrator can reset the mailbox.

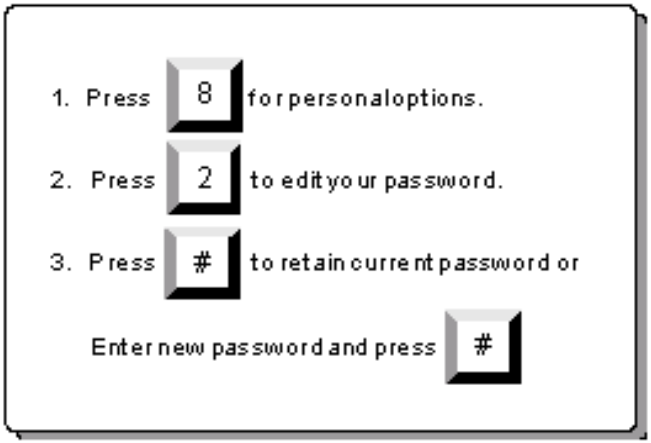

1. Press 8 for personal options.
2. Press 2 to edit your password.
3. Press # to retain current password or
Enter new password and press #

Figure 3-5. Change a Password

To change a password:

1 Press [8] for personal options.

2 Press [2] for password option. The current password plays.

3 Enter the new password followed by [#]

4 Press [#] to keep the new password.

Greeting

The greeting is a personal message that callers hears when they dial a mailbox. The greeting usually tells the caller that the mailbox owner is unavailable, when the owner can be reached, and how to record a message. To record a greeting, the mailbox owner should speak at a natural pace, perhaps just slightly faster than normal.

The Digital Voice Processing System has several greeting options available:

- ❒ Standard
- ❒ Temporary
- ❒ Busy
- ❒ Time Sensitive

When mailbox owners do not record a personal message, the system plays the following message:

> *Please leave a message after the tone. When you are finished, you can hang up or press any key for other options.*

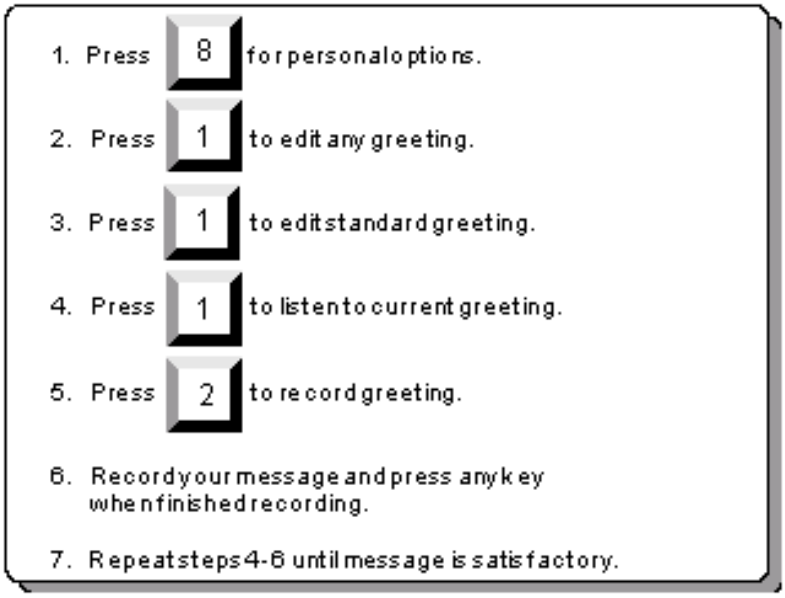

1. Press 8 for personal options.
2. Press 1 to edit any greeting.
3. Press 1 to edit standard greeting.
4. Press 1 to listen to current greeting.
5. Press 2 to record greeting.
6. Record your message and press any key when finished recording.
7. Repeat steps 4-6 until message is satisfactory.

Figure 3-6. Record Standard Greeting

To record a Greeting:

1 Press [8] for Personal Options
2 Press [1] to Record Greeting
3 Press [1] for Standard Greeting options
4 Press [2] to record the Standard greeting

Once the greeting is recorded:

1 Press [1] to review it
2 Press [2] rerecord
3 Press [3] to erase it
4 Press [#] to return

As mentioned, the Digital Voice Processing System has three other greeting types besides the standard greeting.

- **Standard —** Default greeting that is played 24 hours a day, seven days a week or any time a caller accesses a mailbox, unless the mailbox owner has programmed one of the other greetings for special situations. The temporary, time sensitive, and busy greetings override the standard greeting when activated.

- **Temporary —** Mailbox users can record temporary greetings for times when they are out of the office such as vacations, business trips or personal appointments. Temporary greetings become effective as soon as they are recorded.
- **Busy** — This greeting is used when a transfer to an extension encounters a busy extension. In this case, the system checks for a busy greeting and if found, plays the greeting to the caller.
- **Time Sensitive** — The System Administrator configures the mailbox for time sensitive greetings. The mailbox owner can then record greetings based on the System Administrator's schedule (refer to *Section 7*). Note that time sensitive greetings take precedence over all other greetings.

Retrieving Messages

Mailbox subscribers hear their messages played back in the following order: new messages first and then previously saved messages. All messages are played in the order they were received with the oldest message played first, unless programmed differently by the System Administrator. The following diagram shows the features available while reviewing the messages. Features can be accessed at any time. It is unnecessary to wait until the end of the message.

Even if a message is forwarded, it must be saved, deleted or skipped.

If the message is saved, the system erases it automatically after a designated time period. The System Administrator programs this retention period through class of service, typically set to a week. Users should verify the retention period with the System Administrator.

After hearing you have a message, press [1] to listen to the message.

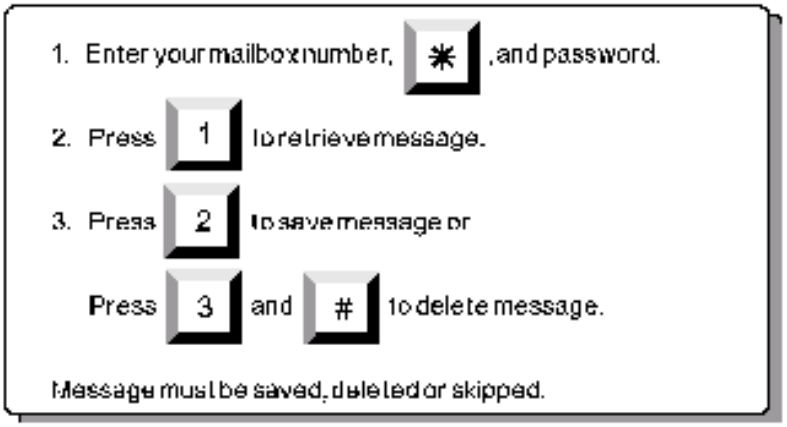

1. Enter your mailbox number, * , and password.
2. Press 1 to retrieve message.
3. Press 2 to save message or
Press 3 and # to delete message.
Message must be saved, deleted or skipped.

Figure 3-7. Retrieve a Message

Options available while listening to a message:

- ❒ Press [6] and [0] to Call Back the internal or external caller that left the message
- ❒ Press [6] and [1] to Skip Directly to Saved Message
- ❒ Press [6] and [2] to Pause, press [2] to Resume
- ❒ Press [6] and [3] to Skip a Message
- ❒ Press [6] and [8] Volume Down
- ❒ Press [6] and [9] Volume Up
- ❒ Press [7] to Rewind
- ❒ Press [8] to Fast Forward

After listening to a message:

- ❒ Press [1] to Replay
- ❒ Press [2] to Save
- ❒ Press [3] and [#] to Delete and Confirm
- ❒ Press [4] to Forward
- ❒ Press [5] to Reply
- ❒ Press [8] to Hear Date/Time

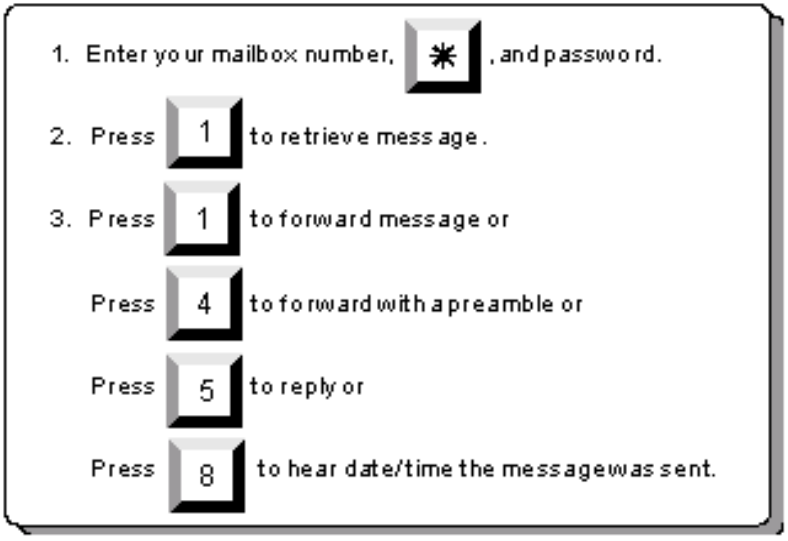

1. Enter your mailbox number, ✳, and password.
2. Press 1 to retrieve message.
3. Press 1 to forward message or
Press 4 to forward with a preamble or
Press 5 to reply or
Press 8 to hear date/time the message was sent.

Figure 3-8. Other Message Options

Other options include:

- Press [1] to Forward As Is
- Press [4] to Leave Preamble and Forward

  Lets a mailbox owner pass the message to another mailbox owner. When forwarding messages, users enter the mailbox number or press [✳] and spell the called person's name. The person receiving the forwarded message hears the preamble (comments) first, followed by the message.
- Press [5] to Reply

  Respond directly to the person who left the message without entering a mailbox number. This feature is available only when the message is recorded in one mailbox, then sent to another mailbox. Calling a mailbox directly and leaving a message does not record the mailbox number for a reply.
- Press [8] to Hear the Date/Time

  Gives the date and time the message was sent. The system automatically attaches this information to each message.

If you hang up without doing a delete or save, your messages are automatically saved in the state they originated when you accessed the mailbox.

Sending A Message

Users may send messages to other mailbox owners or to a system distribution list, a personal distribution list, or to guest mailboxes. Once a message is recorded, a mailbox user can send that message to any number of mailboxes.

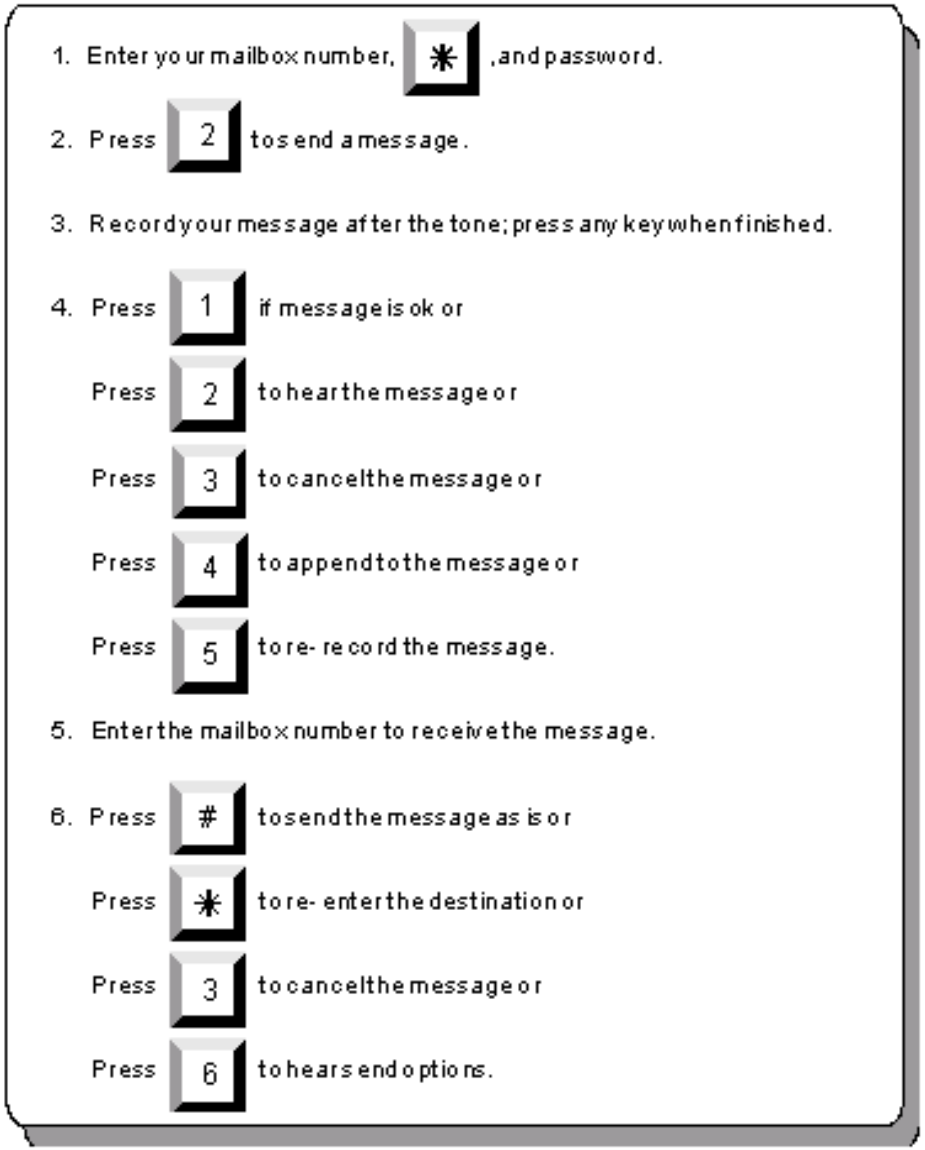

1. Enter your mailbox number, * ,and password.
2. Press 2 to send a message.
3. Record your message after the tone; press any key when finished.
4. Press 1 if message is ok or
Press 2 to hear the message or
Press 3 to cancel the message or
Press 4 to append to the message or
Press 5 to re- record the message.
5. Enter the mailbox number to receive the message.
6. Press # to send the message as is or
Press * to re- enter the destination or
Press 3 to cancel the message or
Press 6 to hear send options.

Figure 3-9. Prepare a Message to Send

To prepare a message to send:

1 Press [2] to send a message.

2 Record your message after the tone.

3 When finished, press any key to end recording. Once a message is recorded, there are several options available:

- ❒ Press [1] if message is okay
- ❒ Press [2] to listen to the message
- ❒ Press [3] to cancel the message
- ❒ Press [4] to append to the message
- ❒ Press [5] to record the message again

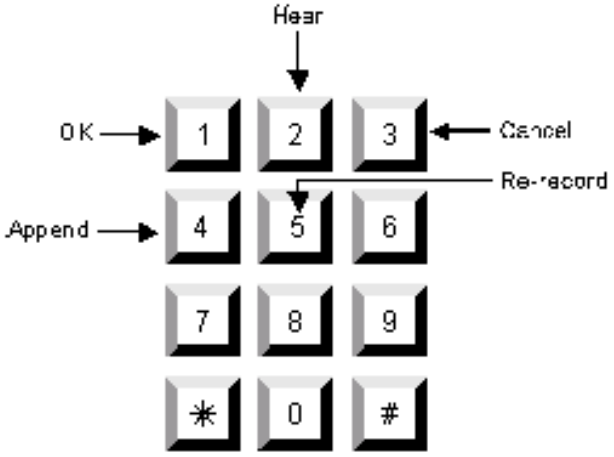


Figure 3-10. Record Message Keys

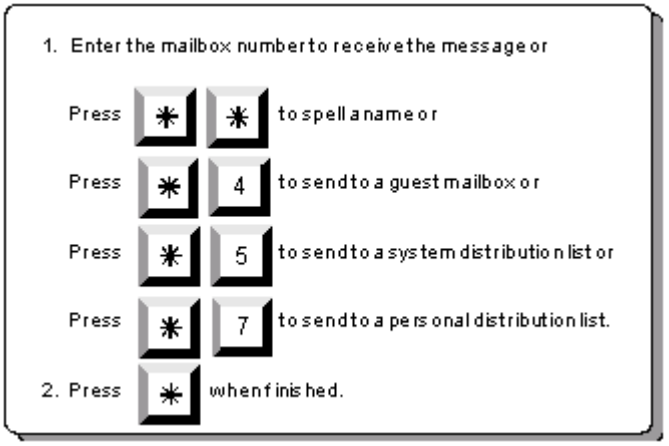

1. Enter the mailbox number to receive the message or
Press * * to spell a name or
Press * 4 to send to a guest mailbox or
Press * 5 to send to a system distribution list or
Press * 7 to send to a personal distribution list.
2. Press * when finished.

Figure 3-11. Mailbox to Receive Message

When the message is ready to send:

1 Enter the desired mailbox number or:

- ❒ [✳] and [✳] to spell a name (1st 4 characters).
- ❒ [✳] and [4] to send to a guest mailbox.
- ❒ [✳] and [5] to send to a system distribution list.
- ❒ [✳] and [7] to send to a personal distribution list (0-9).

2 Press [#] when finished.

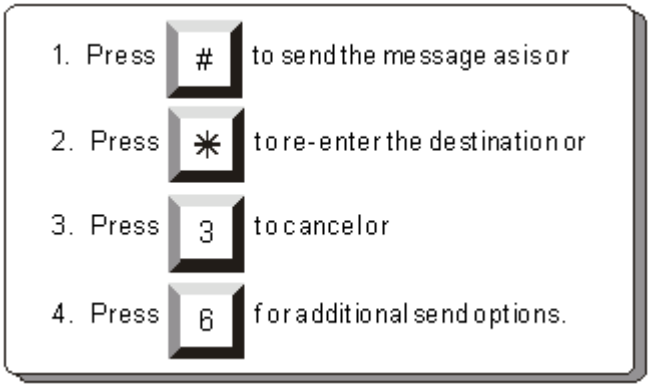

1. Press # to send the message as is or
2. Press * to re-enter the destination or
3. Press 3 to cancel or
4. Press 6 for additional send options.

Figure 3-12. Send Options

The following send options are available:

1 [#] to send message as is.

2 [✳] to reenter send destination.

3 [3] to cancel.

4 [6] For additional send options.

[1] Private

[2] Urgent

[3] Cancel

[4] Confirmation

[1] Certified

[2] Notification of non-delivery

[5] Future Delivery

Enter MM:DD:HH:MM, press:

[1] AM

[2] PM

[#] Confirm

[3] Cancel

[#] Send

If a user does not have the option enabled, the system does not prompt the user. For example: If the Class of Service does not permit spell name, the prompts do not give the user the option, or if the user does not have a guest mailbox defined, the system does not prompt with the 4 option.

Reply To Sender

Reply to Sender lets the user respond to a mailbox message. The Digital Voice Processing System automatically sends the subscriber's reply to the person or mailbox that sent the message. The reply and message also can be sent to other mailboxes, can use the spell by name option, or be sent to a distribution list (personal or system).

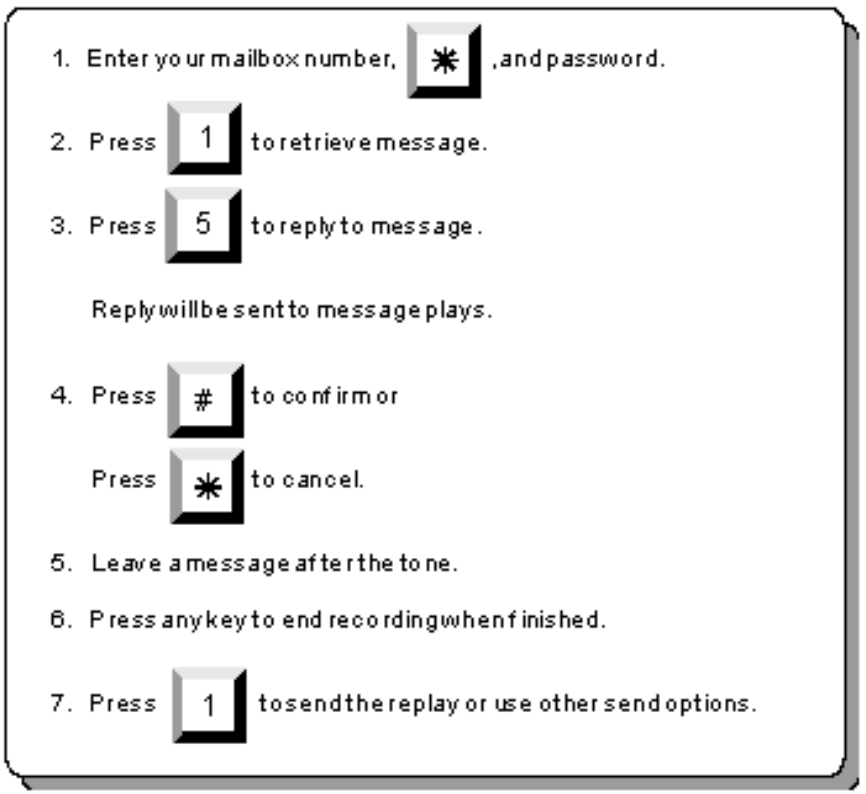

1. Enter your mailbox number, * , and password.
2. Press 1 to retrieve message.
3. Press 5 to reply to message.
Reply will be sent to message plays.
4. Press # to confirm or
Press * to cancel.
5. Leave a message after the tone.
6. Press any key to end recording when finished.
7. Press 1 to send the replay or use other send options.

Figure 3-13. Reply to a Message

To reply to the sender:

1 Press [1] to retrieve message.
2 Press [5] to reply to message.
3 Press [#] to confirm or press [✳] to cancel.
4 Leave your message and press any key.

After recording the reply the options are:

- Press [1] to send the reply.
- Press [2] to replay the reply.
- Press [3] to cancel the reply.
- Press [4] to re-record the reply.

After the reply, the system returns you to the retrieve message function.

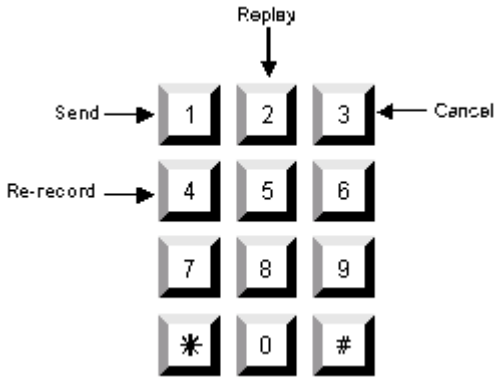


Figure 3-14. Re-record Keys

State

The mailbox State determines how the system handles a call when someone leaves a message. Usually, this means playing the called party's personal greeting, then prompting the caller to leave a message. However, several other feature selections let the call be handled differently.

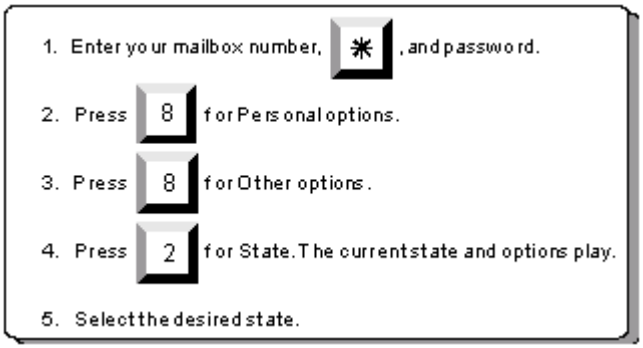

1. Enter your mailbox number, * , and password.
2. Press 8 for Personal options.
3. Press 8 for Other options.
4. Press 2 for State. The current state and options play.
5. Select the desired state.

Figure 3-15. Set the State

To set the state:

1 Press [8] for personal options.

2 Press [8] for other options.

3 Press [2] for mailbox state options.

Refer to *Section 5* for additional information on state functions.

Activating this feature may cause the system to perform in an unexpected manner.

The diagram below shows the available state options:

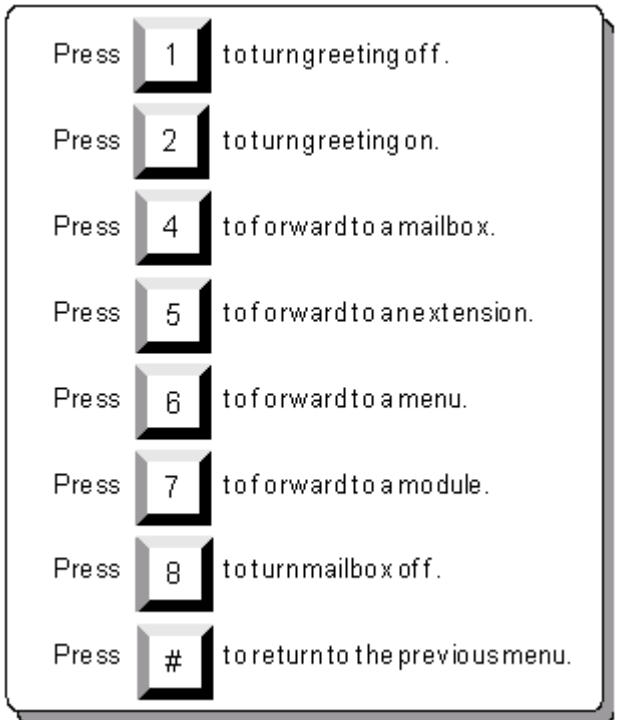

Press 1 to turn greeting off.
Press 2 to turn greeting on.
Press 4 to forward to a mailbox.
Press 5 to forward to an extension.
Press 6 to forward to a menu.
Press 7 to forward to a module.
Press 8 to turn mailbox off.
Press # to return to the previous menu.

Figure 3-16. State Functions

Message Notification

Message Notification instructs the system to contact the mailbox owner on receipt of a message by dialing an alternate phone number or activating a paging device. Refer to *Section 5* for additional information on message notification.

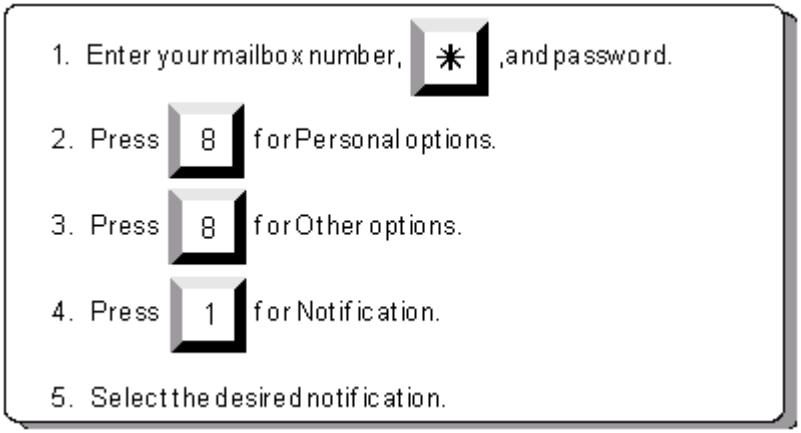

1. Enter your mailbox number, * ,and password.
2. Press 8 for Personal options.
3. Press 8 for Other options.
4. Press 1 for Notification.
5. Select the desired notification.

Figure 3-17. Set Message Notification

To set message notification:

1 Press [8] for personal options.

2 Press [8] for other options.

3 Press [1] for notification.

Notification type can be *immediate*, *timed* or *urgent only*.

- **Immediate** — The system dials the mailbox owner as soon as the message is left.
- **Timed** — The system waits for a set time before dialing the mailbox owner.
- **On Urgent Only** — Activates notification when messages are marked as urgent.

The following diagram shows the notification selections:

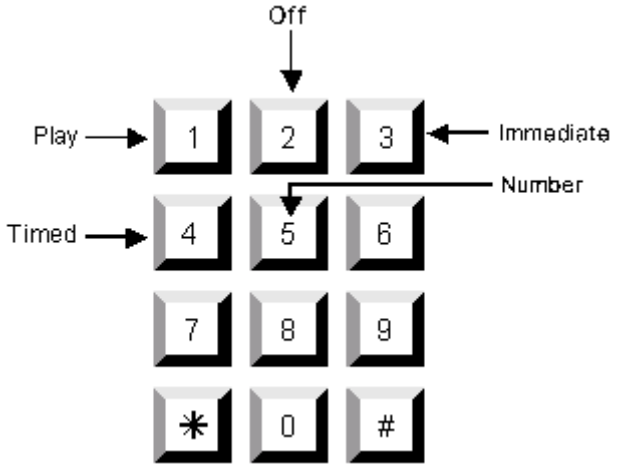


Figure 3-18. Message Notification Keys

Message notification functions include:

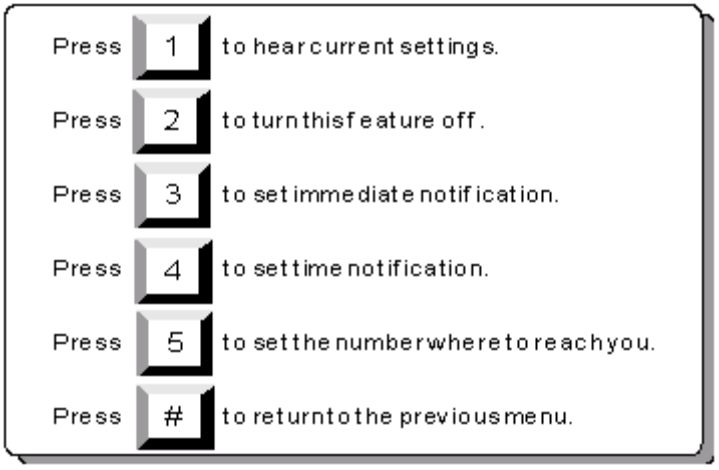

Press 1 to hear current settings.
Press 2 to turn this feature off.
Press 3 to set immediate notification.
Press 4 to set time notification.
Press 5 to set the number where to reach you.
Press # to return to the previous menu.

Figure 3-19. Message Notification Functions

- ❒ Press [1] to play the current settings.
- ❒ Press [2] to turn this feature off.
- ❒ Press [3] to set immediate notification.
- ❒ Press [4] to set time notification.
- ❒ Press [5] to set the number where to reach you. This number can be an internal extension, outside phone number, or digital pager.

When the system calls a mailbox owner, the owner hears:

You have a new message (Name). Please enter your password to accept the message.

Owners can access their messages manually anytime. However, if an owner is expecting an important message or does not plan to be in the office, this feature provides added flexibility.

For notification per time period, the system administrator must create a Command File. See Appendix C for examples and instructions.

Distribution Lists

The Distribution List option lets users create a message and send it to a group of mailboxes. The System Administrator can create lists for mailbox users. For example, there could be a system distribution list for all employees involved in a particular product, or all employees in a department.

Send to Distribution List

The following diagram shows how to send a message to a distribution list.

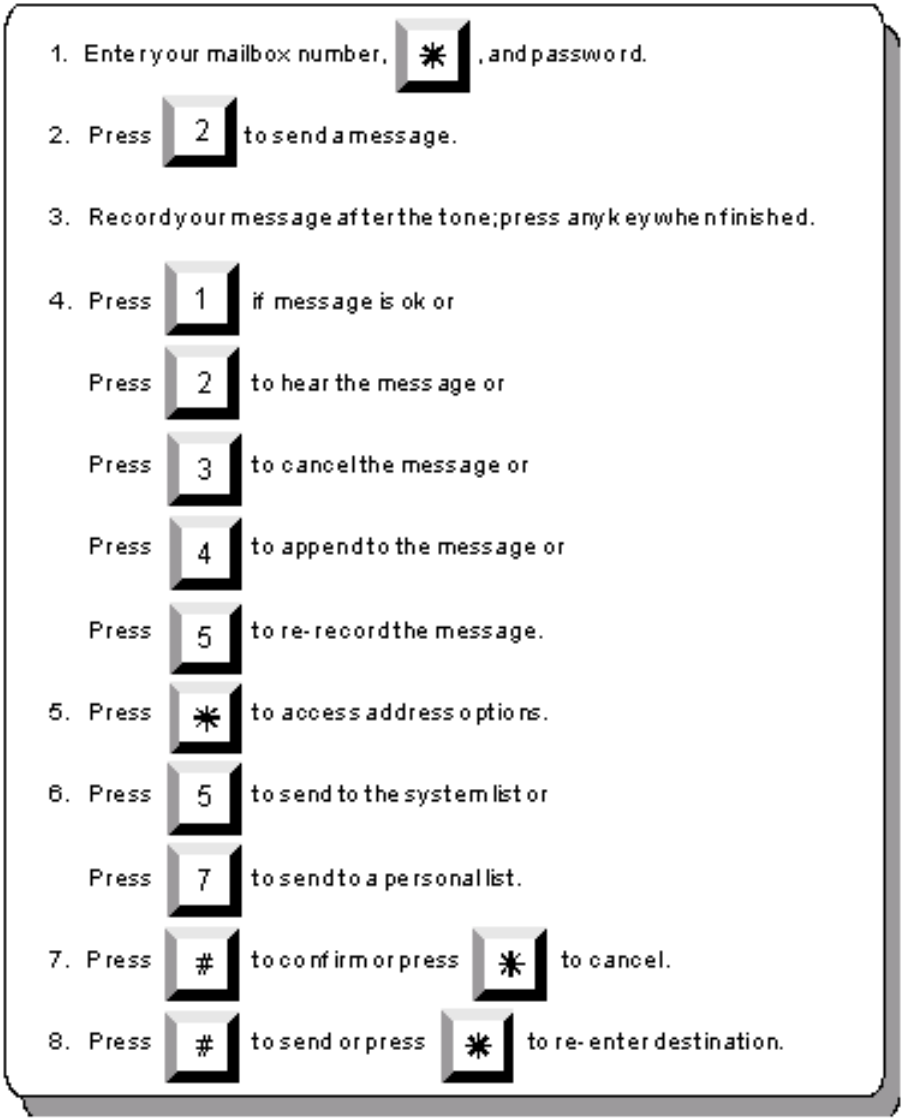

1. Enter your mailbox number, * , and password.
2. Press 2 to send a message.
3. Record your message after the tone; press any key when finished.
4. Press 1 if message is ok or
Press 2 to hear the message or
Press 3 to cancel the message or
Press 4 to append to the message or
Press 5 to re-record the message.
5. Press * to access address options.
6. Press 5 to send to the system list or
Press 7 to send to a personal list.
7. Press # to confirm or press * to cancel.
8. Press # to send or press * to re-enter destination.

Figure 3-20. Send Message to Distribution List

Personal Distribution Lists

The Digital Voice Processing System lets mailbox users create, edit or delete up to ten personal distribution lists. Each list may contain up to 25 mailboxes.

Create a Distribution List

Use the instructions in the following diagram (if you are calling into a VM port) to create a personal distribution list. Personal distribution lists are useful for sending meeting reminders or other notices to groups.

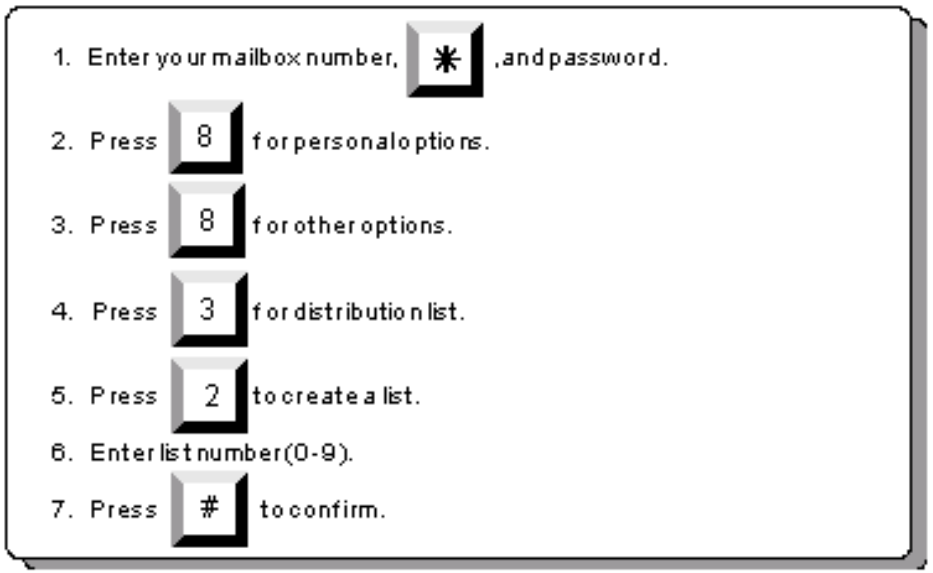

1. Enter your mailbox number, * ,and password.
2. Press 8 for personal options.
3. Press 8 for other options.
4. Press 3 for distribution list.
5. Press 2 to create a list.
6. Enter list number(0-9).
7. Press # to confirm.

Figure 3-21. Distribution List

Add Mailbox Entries to Personal List

Use the following diagram to add mailbox entries into an existing list.

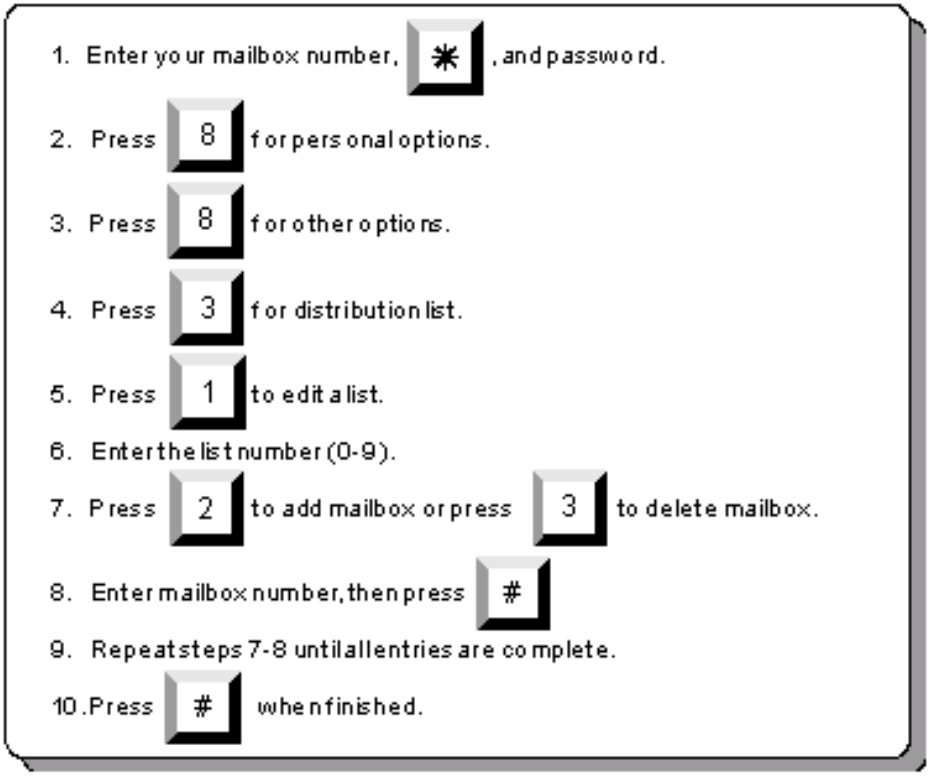

1. Enter your mailbox number, * , and password.
2. Press 8 for personal options.
3. Press 8 for other options.
4. Press 3 for distribution list.
5. Press 1 to edit a list.
6. Enter the list number (0-9).
7. Press 2 to add mailbox or press 3 to delete mailbox.
8. Enter mailbox number, then press #
9. Repeat steps 7-8 until all entries are complete.
10. Press # when finished.

Figure 3-22. Add / Delete Mailbox Entries

Delete a Mailbox Entry on Personal List

Use the following diagram to delete a mailbox entry from a list. Useful for keeping personal lists current when mailbox users are in special groups.

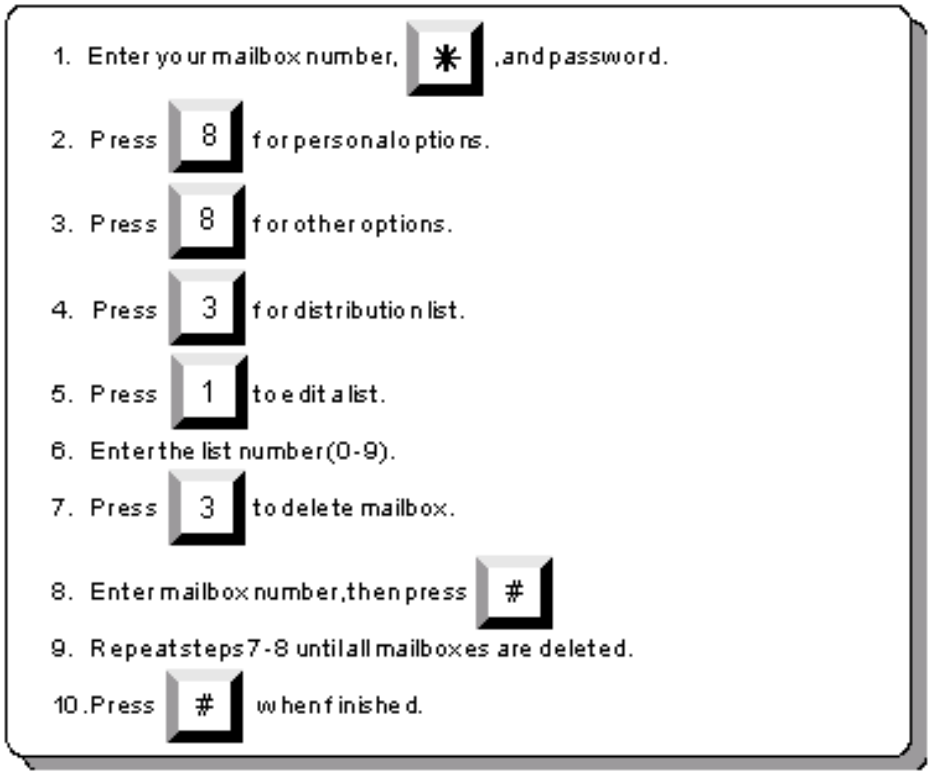

1. Enter your mailbox number, * ,and password.
2. Press 8 for personal options.
3. Press 8 for other options.
4. Press 3 for distribution list.
5. Press 1 to edit a list.
6. Enter the list number(0-9).
7. Press 3 to delete mailbox.
8. Enter mailbox number,then press #
9. Repeat steps 7-8 until all mailboxes are deleted.
10. Press # when finished.

Figure 3-23. Delete a Mailbox

Delete a Personal List

This feature is helpful in keeping complete lists current and making room for current lists. Delete a list when it is no longer needed.

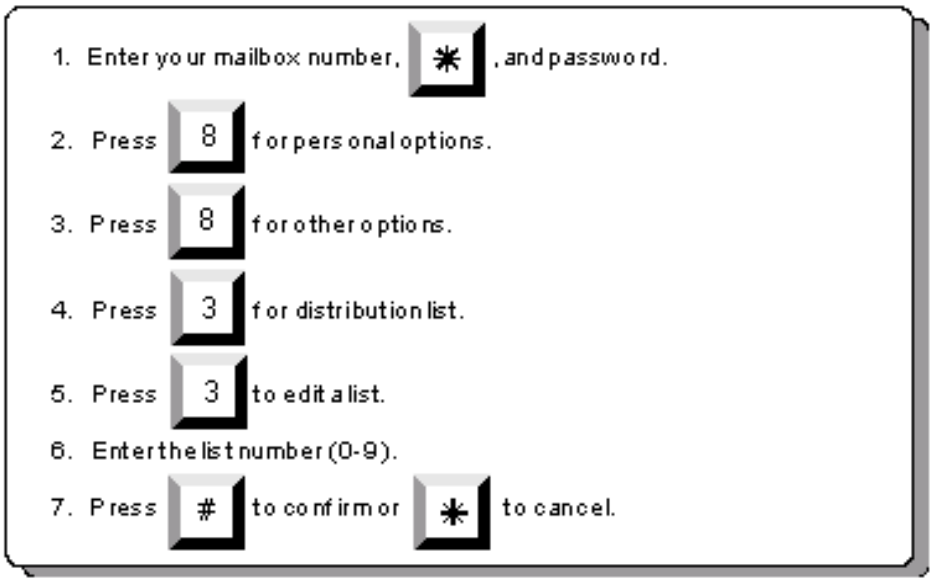

1. Enter your mailbox number, * , and password.
2. Press 8 for personal options.
3. Press 8 for other options.
4. Press 3 for distribution list.
5. Press 3 to edit a list.
6. Enter the list number (0-9).
7. Press # to confirm or * to cancel.

Figure 3-24. Delete a Personal List

Guest Mailboxes

The Digital Voice Processing System lets users create up to ten guest mailboxes. Guest mailboxes are utilized by individuals who do not have their own permanent mailbox on the system. Guests receive messages from the mailbox owner and can easily reply to the message.

The Guest Greeting recording must include a prompt for the Guest to enter their mailbox number, followed by [#].

Create a Guest Mailbox

Each guest mailbox can contain up to ten messages. Use the following diagram to create a guest mailbox.

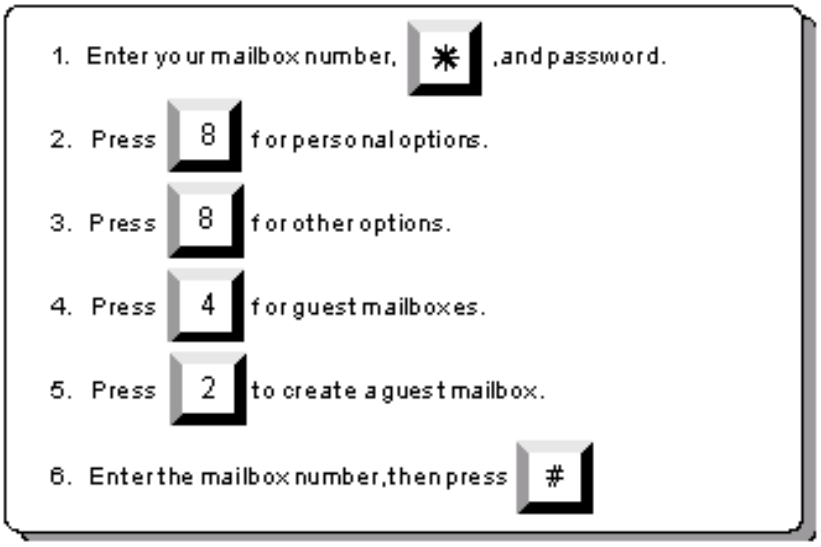

1. Enter your mailbox number, * ,and password.
2. Press 8 for personal options.
3. Press 8 for other options.
4. Press 4 for guest mailboxes.
5. Press 2 to create a guest mailbox.
6. Enter the mailbox number, then press #

Figure 3-25. Create a Guest Mailbox

Once a guest mailbox is created, the guest mailbox creator has the following options:

- Press [1] to list mailboxes
- Press [2] to create a mailbox
- Press [3] to delete a mailbox
- Press [4] to edit mailbox greetings

The Digital Voice Processing System uses one guest mailbox greeting for all guest mailboxes. This greeting is played whenever a guest mailbox user accesses the guest mailbox. The guest greeting should be generic. For example:

To see if I left you a message, enter your guest mailbox number followed by [#].

The Guest Greeting recording must include a prompt for the Guest Mailbox user to enter their Guest Mailbox number followed by [#].

Guest Messages

Use the following diagram to leave messages for guest mailboxes.

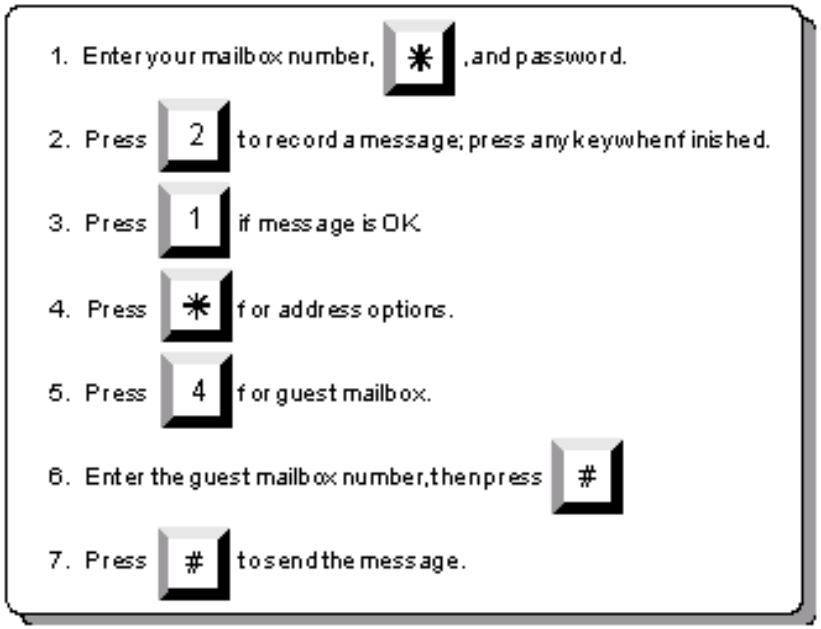

1. Enter your mailbox number, * , and password.
2. Press 2 to record a message; press any key when finished.
3. Press 1 if message is OK.
4. Press * for address options.
5. Press 4 for guest mailbox.
6. Enter the guest mailbox number, then press #
7. Press # to send the message.

Figure 3-26. Send a Guest Message

Using a guest mailbox:

1 Have the guest call into the system and access the owner's mailbox.

2 While listening to the mailbox greeting, press [4] (G for guest).

3 After pressing [4], the caller hears the guest greeting recorded by the mailbox owner.

4 Guests enter the mailbox number assigned to them followed by [#].

5 The system plays any messages stored in the guest mailbox.

6 After each message, the guest can:

- ❒ Press [1] to replay messages
- ❒ Press [3] to play next message
- ❒ Press [2] to reply to owner
- ❒ Press [8] to timestamp

The system automatically deletes guest messages. The guest mailbox owner cannot save or forward the message.

Voice Note Pad

The Voice Note Pad is a programmable voice database that uses recorded information for retrieval later. For example, a system user wants to track the phone numbers of various business contacts, including the ABC Company. The user first creates an information group called Business Phone Numbers. The user enters 222, a keyword or ID for the ABC company (222 represents the letters ABC on the phone key pad). The person then records the ABC Company's phone number, business hours, and any additional information. To hear this information, the user simply accesses the note pad, selects the Business Phone Numbers information group, and enters the ID code for ABC Company.

- The note pad can create up to eight information groups.
- The number of entries stored in a group is limited only by the available disk space.
- Entry IDs can be any combination of keys 0-9 and from 1-8 digits.

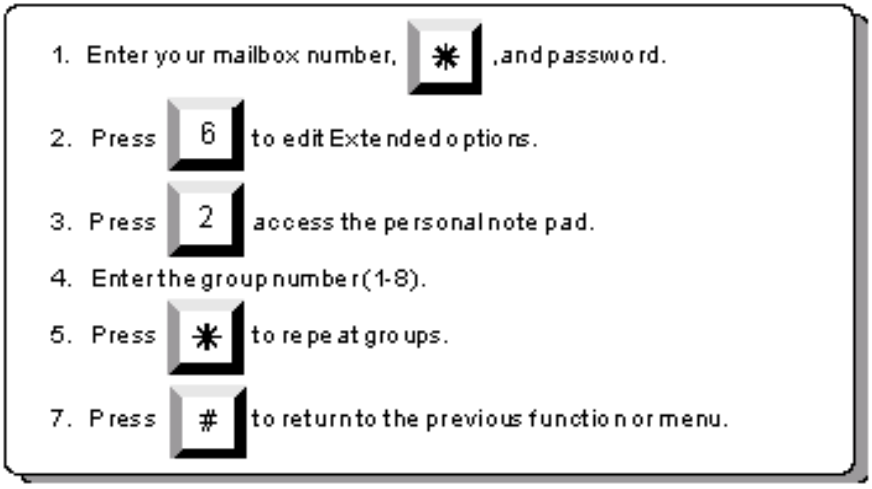

1. Enter your mailbox number, * ,and password.
2. Press 6 to edit Extended options.
3. Press 2 access the personal note pad.
4. Enter the group number (1-8).
5. Press * to repeat groups.
7. Press # to return to the previous function or menu.

Figure 3-27. Note Pad Information Groups

Steps to follow when working with the voice note pad:

1 Access your mailbox.

2 Press [6] to edit Extended Options.

3 Press [2] to access the personal note pad.

4 Select an option from the following:

- A group number (system names the groups already set up).
- Valid numbers are 1-8.
- To repeat groups, press [✳].
- Press [#] to return.

Create an Information Group

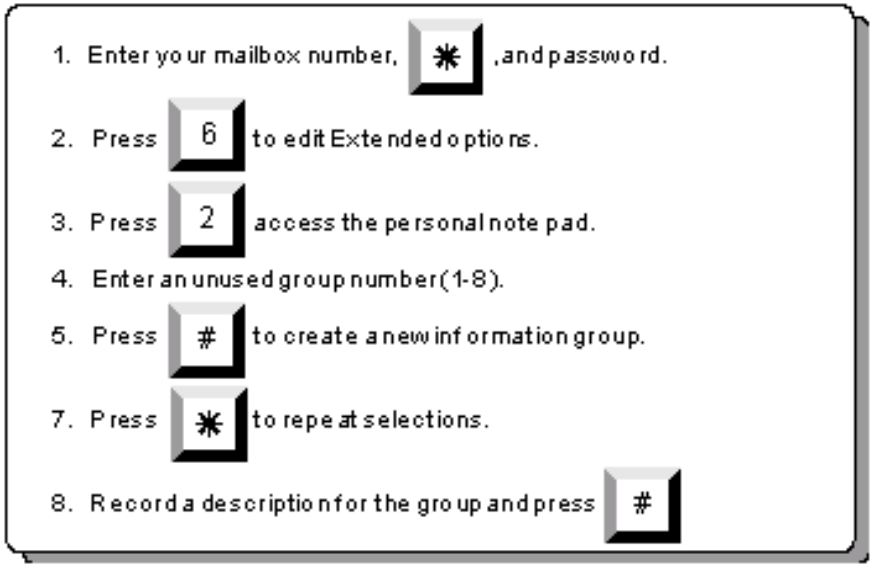

1. Enter your mailbox number, * ,and password.
2. Press 6 to edit Extended options.
3. Press 2 access the personal note pad.
4. Enter an unused group number(1-8).
5. Press # to create a new information group.
7. Press * to repeat selections.
8. Record a description for the group and press #

Figure 3-28. Create an Information Group

To create a new information group, follow the instructions for accessing a voice note pad, then:

1 Select an option
   - ❒ Enter an unused group number from 1-8.
   - ❒ Press [#] to create an information group.
   - ❒ Press [✳] to repeat selections.

2 Record a brief description for the new group. When finished, press [#]. You hear: *New Group Created*

Modify an Information Group

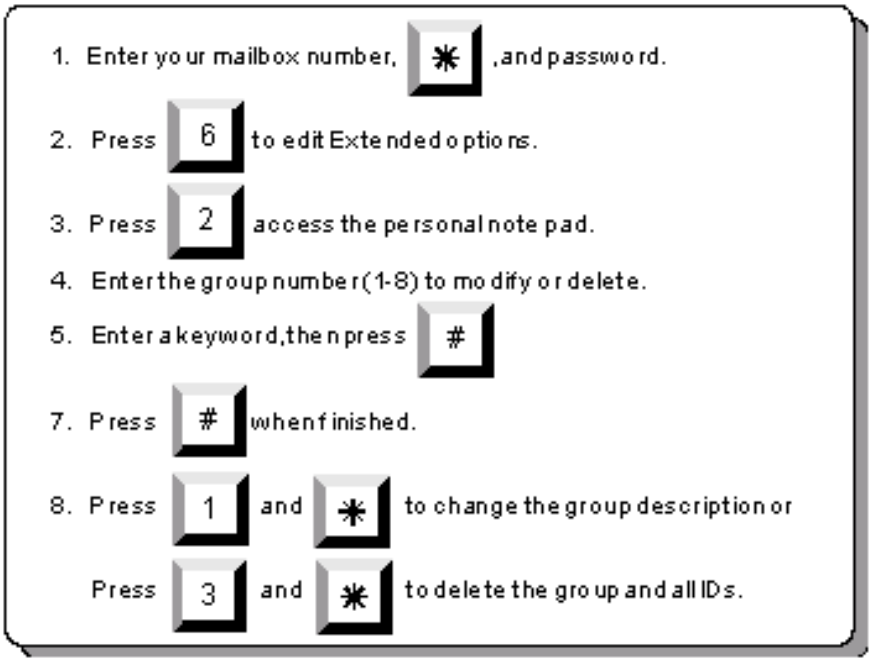

1. Enter your mailbox number, * ,and password.
2. Press 6 to edit Extended options.
3. Press 2 access the personal note pad.
4. Enter the group number(1-8) to modify or delete.
5. Enter a keyword,then press #
7. Press # when finished.
8. Press 1 and * to change the group description or
Press 3 and * to delete the group and all IDs.

Figure 3-29. Add, Change, or Delete a Group

To add, modify, or delete information in a group, change the group description or delete the entire group, access the group using the procedures above, then:

1 Enter the group number to modify. You hear: *You selected (Group Description)*

2 Enter the keyword, then press [#].

3 When finished, press [#], then:

- ❒ Press [1] + [✳] to change group description
  or
- ❒ Press [3] + [✳] to delete group and all IDs.

Add a New Entry

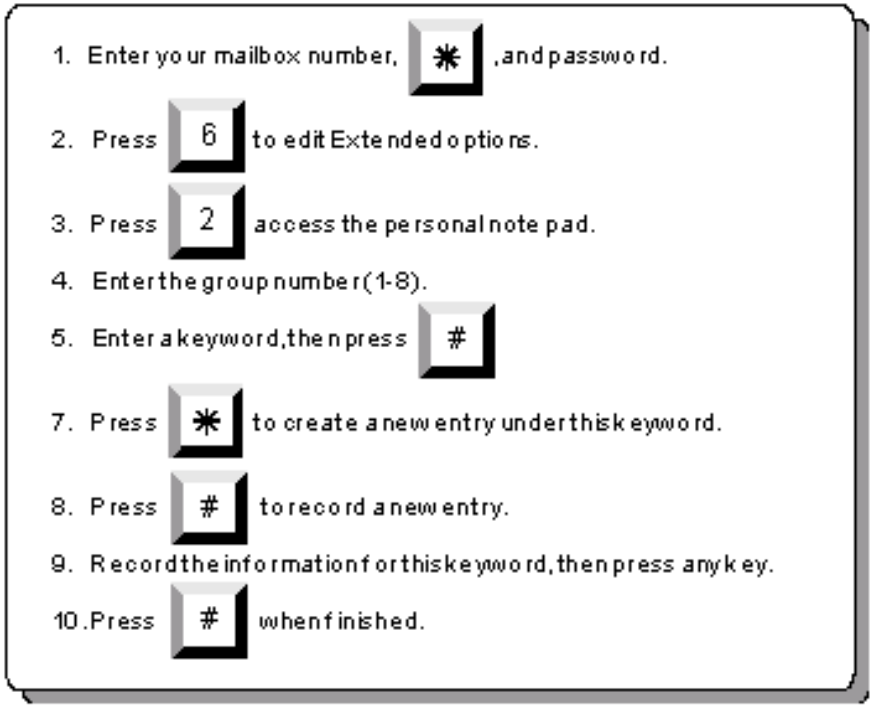

1. Enter your mailbox number, * , and password.
2. Press 6 to edit Extended options.
3. Press 2 access the personal note pad.
4. Enter the group number (1-8).
5. Enter a keyword, then press #
7. Press * to create a new entry under this keyword.
8. Press # to record a new entry.
9. Record the information for this keyword, then press any key.
10. Press # when finished.

Figure 3-30. Add an Entry to an Information Group

1 Enter a keyword, then press [#]. You hear: *There is no information for the keyword you entered. To create a new entry under this keyword, press [#]*

2 Press [✳] to enter.

3 Press [#] to record a new entry. You hear: *After the tone, start recording. When finished, press any key.*

4 Record the information you want associated with this keyword. When done, press [#]. You hear: *ID information created.*

Modify an Existing Entry

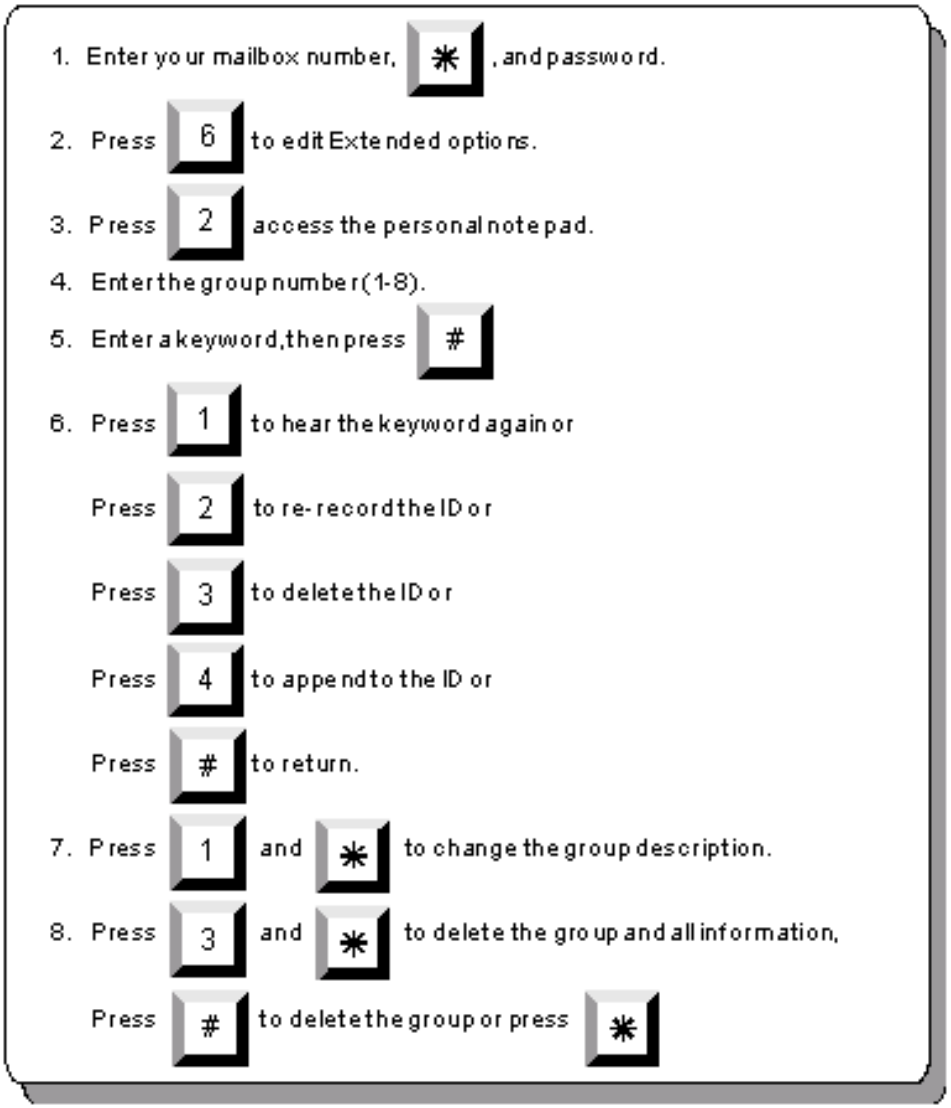

1. Enter your mailbox number, *, and password.
2. Press 6 to edit Extended options.
3. Press 2 access the personal note pad.
4. Enter the group number (1-8).
5. Enter a keyword, then press #
6. Press 1 to hear the keyword again or
Press 2 to re-record the ID or
Press 3 to delete the ID or
Press 4 to append to the ID or
Press # to return.
7. Press 1 and * to change the group description.
8. Press 3 and * to delete the group and all information,
Press # to delete the group or press *

Figure 3-31. Modify or Delete an Information Group Entry

1 Enter the keyword, you hear:
   - ❒ Press [1] to hear again
   - ❒ Press [2] to re-record ID
   - ❒ Press [3] to delete ID
   - ❒ Press [4] to append to ID
   - ❒ Press [#] to return

2 Press [1] + [✳] to change the group description. You hear:
   - ❒ After the tone, record the new group description

3 Press [3] + [✳] to delete the group and all information stored in the group. You hear:
   - ❒ Press [#] to delete group
   - ❒ Otherwise, press [✳]

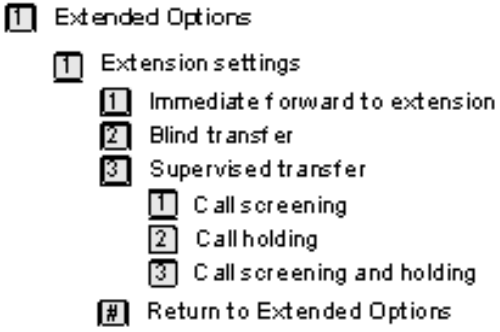
Automated Attendant Operation

Access the Auto Attendant menu using the Voicemail Menu. Press [6] (Extended Options) on the Main Voicemail menu to change Auto Attendant functions. Features available to a voicemail owner are dependent on the configuration set by the System Administrator. This section discusses the basic features available to Mailbox Owners.

The Digital Voice Processing System Auto Attendant Module performs call transfers without the assistance of a live operator. The Digital Voice Processing System supports two transfer methods: Blind and supervised.

Automated Attendant Functions

The following shows the functions for the Automated Attendant:



System Access

System access lets a mailbox user set and edit the special Automated Attendant features. Access extension features through the Voicemail Owner menu.

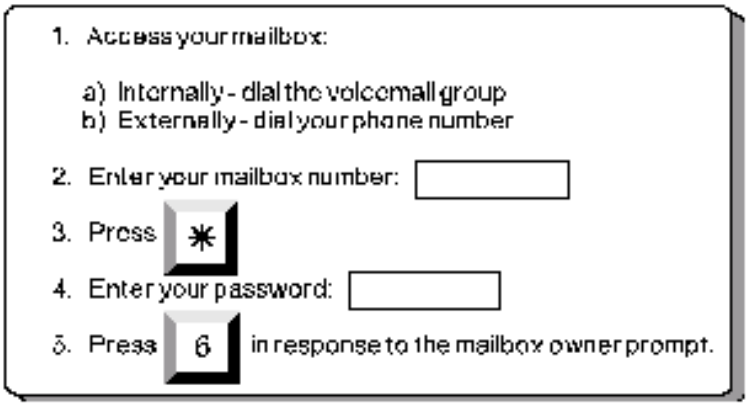

1. Access your mailbox:
a) Internally - dial the voicemail group
b) Externally - dial your phone number
2. Enter your mailbox number:
3. Press *
4. Enter your password:
5. Press 6 in response to the mailbox owner prompt.

Figure 3-32. Access Extension Options

Call Transfer Options

The diagram below shows the Transfer Option selections. The Digital Voice Processing System transfers calls using several methods. The method of transfer is changed through Extension Maintenance.

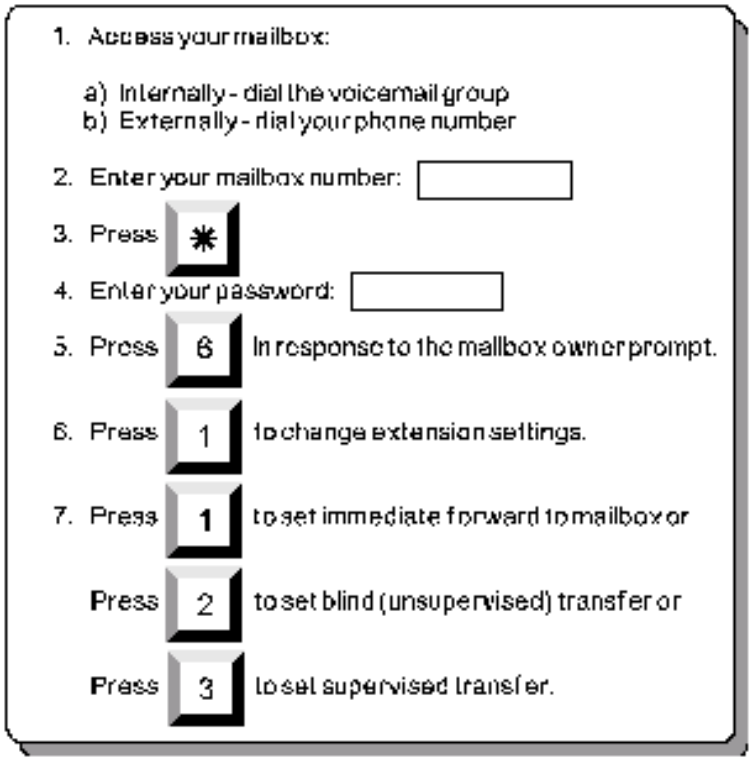

1. Access your mailbox:
a) Internally - dial the voicemail group
b) Externally - dial your phone number
2. Enter your mailbox number:
3. Press *
4. Enter your password:
5. Press 6 In response to the mailbox owner prompt.
6. Press 1 to change extension settings.
7. Press 1 to set immediate forward to mailbox or
Press 2 to set blind (unsupervised) transfer or
Press 3 to set supervised transfer.

Figure 3-33. Call Transfer Options

1 Press [1] for the extension settings option.

2 Select the desired transfer option. When the Digital Voice Processing System forwards a call to an extension the transfer can be:

- **Immediate Forward** — Press [1] and the Digital Voice Processing System forwards the call immediately to the mailbox without trying to reach the extension.
- **Unsupervised (Blind)** — Press [2] and the Digital Voice Processing System does not monitor the transfer, it transfers immediately to the extension. In the event the call is unanswered, the system does not forward the call. Note that the station must be call forwarded to voicemail.

- **Supervised** — Press [3] and the Digital Voice Processing System monitors the transfer. If the call is unanswered, it is forwarded. If the System Administrator enables the Call Screening or Call Holding functions, the extension can be set with these options:

  Press [1] to set Call Screen

  Press [2] to set Call Hold

  Press [3] to set Both

Call transfers to the mailbox or extension of the person calling.

If the transfer is Supervised or Immediate Forward, select where to forward the call.

4 Online Administration

Overview

After connections are established (see *Section 2*), the system accepts calls. Remember that the laptop/PC administration or telephony administration (limited access) can be used to configure the Digital Voice Processing System unit. This section describes the telephony administration.

Access the system as the system administrator and perform the following steps:

1. Dial any of the extension numbers connected to the Digital Voice Processing System.
2. The system responds with:

   Thank you for calling. If you know your party's extension you may dial it now. If you know your party's name but not their extension, please dial [4]. To reach an operator dial [0] or remain on the line. To listen to the instructions again, dial [✳].
   If the system is in night mode, it plays:

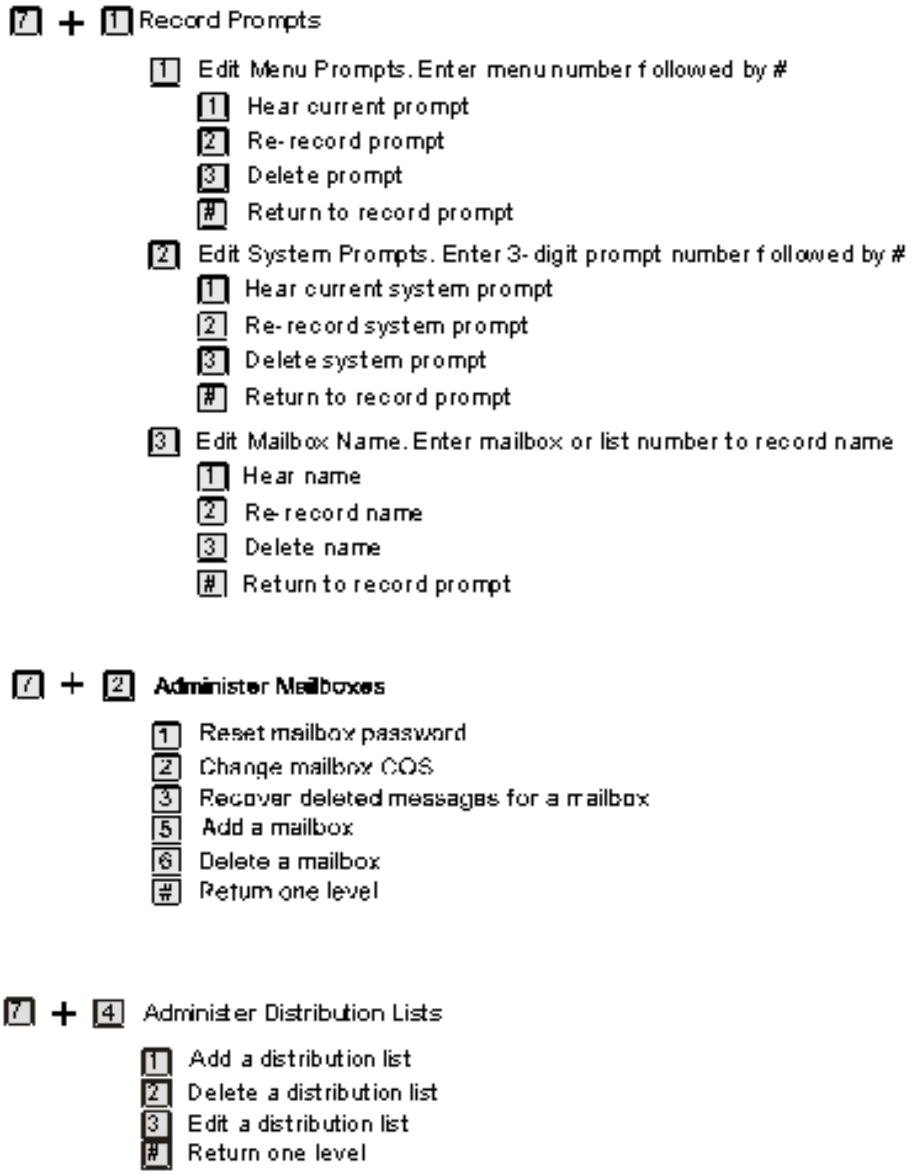
   Thank you for calling. Our offices are closed. Please call back at a later time.
   If the greeting was re-recorded, a different prompt plays.
3. To access voicemail, press [7].
4. Enter mailbox number.
5. Press [✳] followed by the password. The default password is 0000.
6. Press [7] to access administrator functions. If the mailbox is not in the supervisor Class of Service, the system prompts for the administrator password. The default administrator password is [2275]. The password must be entered within 3 seconds.

With the online administration, data is entered only through a touch-tone telephone. The Admin Password can be changed in the Registry (only by using the laptop/PC).

If you have not configured your phone system, do so now. Refer to Section 2 for information.

Supervisor Functions

The following is an overview of the Administrative Functions.


7 + 1 Record Prompts
1 Edit Menu Prompts. Enter menu number followed by #
1 Hear current prompt
2 Re-record prompt
3 Delete prompt
Return to record prompt
2 Edit System Prompts. Enter 3-digit prompt number followed by #
1 Hear current system prompt
2 Re-record system prompt
3 Delete system prompt
Return to record prompt
3 Edit Mailbox Name. Enter mailbox or list number to record name
1 Hear name
2 Re-record name
3 Delete name
Return to record prompt
7 + 2 Administer Mailboxes
1 Reset mailbox password
2 Change mailbox COS
3 Recover deleted messages for a mailbox
5 Add a mailbox
6 Delete a mailbox
Return one level
7 + 4 Administer Distribution Lists
1 Add a distribution list
2 Delete a distribution list
3 Edit a distribution list
Return one level

7 + 5 **Administer Broadcast Messages**

- 1 Listen to message
- 2 Create a message
- 3 Cancel a broadcast message
- # Return one level

7 + 8 System Administration

- 1 Set up Voice Lines. Enter port number to configure or press 0 for all ports. Enter module to run.
  - 1 Voicemail
  - 2 Automated Attendant
  - 3 Menu
  - # Return one level
- 2 Select a Phone System. Enter 3-digit number for configuration to load
  - # Return one level
- 3 System Shutdown
  - 1 Shut down and park system
  - 2 Shut down and reboot system
  - # Return one level
- 4 System Date / Time
  - # Return one level

Record Prompts

Record Prompts handles the recording of various prompts in the system. With this option, the administrator can edit three types of prompts:

- Menu prompts
- System prompts
- Mailbox signatures

Option prompts are played during options processing. A caller hears this prompt instructing them on what keys to press for an option. System prompts are generic prompts for basic system functions, such as the voicemail instruction prompt or the auto attendant instruction prompt. These can be customized.

Mailbox signatures are the recorded names associated with a particular mailbox.

For all of these prompts, if the prompt does not exist, the only option available is to record a new one. If the prompt does exist, it can be played, re-recorded, or deleted.

Edit Menu Prompts

Editing Menu Prompts overwrites the default option prompts. It plays the current greeting if it exists and lets you record or re-record a greeting, depending on whether one exists. If a greeting exists, it can be changed or deleted. These prompts play:

Enter the menu number followed by [#]. Press [#] to return.

At this point, enter the menu number. (Default Menus are 100-179)

[1] to hear greeting
[2] to re-record
[3] to delete
[#] when finished

Edit System Prompts

Editing System Prompts allows re-recording of default system prompts. The table below outlines the customizable prompts used while in the Record Prompts option of the Administrative Functions. All prompts are located in the VOX directory. Record new information to replace the default prompt, or create a blank prompt (with one byte of data) to suppress certain prompts. These prompts play:

Enter the 3-digit prompt number to re-record followed by [#]. Press [#] to go back.

At this point, enter the prompt number to edit. (Default prompt numbers are 001-012. See Section).

[1] listen to Current System prompt
[2] to re-record the Current Custom prompt
[3] to delete the Custom System prompt
[#] to edit another prompt

Prompt	Number	Description
VOPGPRE.VOX	001	Preamble prompt that plays in front of a numeric page. *Page message is. You have a message to call.*
VMINSTR.VOX	002	Voicemail instructions prompt. *Enter the mailbox number of the person you are trying to reach. Press 0 for the operator. Press ✻ for the directory.*
VMSYSGRT.VOX	003	First system greeting. Played if selected in COS. The person you have tried to reach is not available. Please leave a message after the tone.
VMSYSGR2.VOX	004	Second system greeting. Played if selected in COS. *Begin speaking at the tone. When you are finished recording, you may hang up or press any key for more options.*
VMRECKEY.VOX	005	Replaces the record start key prompt. *To start recording press 1.*
VMRECOPT.VOX	006	Replaces the record option prompt. *To send message, press 1; To play message, press 2; To cancel message, press 3; To append message press 4; To re-record message press 5.*
DIRGETDI.VOX	007	Prompt asking for lookup digits in directory. *Enter the first four characters of the person's last name. For Q, press 7. For Z, press 9.*
AAINSTR.VOX	008	Provides auto attendant instructions. *Enter the extension number of the person you are trying to reach. For the company directory press ✻. To reach an operator, press 0.*
AAHVCALL.VOX	009	Prompt announcing that an extension has a call. *You have a call.*
AACALLFO.VOX	010	Announces that the extension has a call for a particular extension. *Call for...*
AASCNASK.VOX	012	Prompt asking caller to say name. *Who may I say is calling?*

Table 4-1. Editing System Prompts

Prompt	Number	Description
AAXFRMSG.VOX	013	Prompt telling callers they will be transferred. *Please hold while I transfer you to...*
AAHOLD.0	014	First prompt played when the system must put a caller on hold and the COS plays to play hold files. *Please hold. We appreciate your patience...* By default, this prompt is not active on the system.
AAHOLD.1	015	Hold files played when the system needs to put a caller on hold and the COS plays to play hold files. *Please continue to hold...*
AAHOLD.2	016	Hold files played when the system needs to put a caller on hold and the COS plays to play hold files. *Please continue to hold...*
⋮	⋮	⋮
AAHOLD.9	023	Hold files played when the system needs to put a caller on hold and the COS plays to play hold files. *Please continue to hold...*

Table 4-1. Editing System Prompts (Continued)

Edit Mailbox Names

The Edit Mailbox Name option changes a mailbox name or a list (group) of mailbox names. An example of when a mailbox name is used is when the name plays when you select to transfer your phone to another extension.

A system list is a group of mailboxes where specific messages are sent; for example, a group of mailboxes associated with people in a department such as Sales. These prompts play:

Enter the mailbox or list number to record signature followed by [#]. Press [#] to go back.

Enter the mailbox or list number followed by #. The system plays the current signature for the list or mailbox.

[1] to hear name
[2] to re-record
[3] to delete
[#] when finished
[#] returns one level

Mailbox Administration

Mailbox Administration resets mailbox passwords, creates new mailboxes and deletes mailboxes. With this option, the administrator controls and changes the subscriber's (user's) mailbox actions. Mailbox Administration consists of:

- Reset the mailbox password
- Change the mailbox COS
- Recover deleted messages for a mailbox
- Add a mailbox
- Delete a mailbox

Reset the Mailbox Password

This option lets the administrator reset the mailbox password. This is helpful if the password is forgotten. These prompts play:

> *Enter the mailbox number followed by [#].*

Enter the mailbox number followed by #. The system plays:

> *The current password. To leave password as entered press [#]. To change, enter new password followed by [#].*

When the password is changed, the system plays:

> *The new password is yyyy, press [#] to confirm or [✳] to cancel.*

Return to Mailbox Administration. If the password is not changed, the system plays:

> *Password has not been changed.*

Returns to the previous level.

Change the Mailbox COS

This option changes the characteristics of a particular mailbox to that of a different Class of Service. For example, there may be a COS set for a message record length that is different from the original COS setting.

The COS that you are changing must already exist. Refer to Section 5 for more information on the available COS options.

These prompts play:

Enter the mailbox number followed by [#].

Enter the mailbox number followed by [#]. The system plays the current class of service. To leave class of service as entered, press [#]. To change, enter the new class of service followed by [#] or press [#]. When the class of service is changed, the system plays:

The new class of service is yyy, press [#] to confirm or [✳] to cancel.

When [✳] is pressed, the system plays:

Class of service has not been changed.

Return to Mailbox Administration. When [#] is pressed, the system plays:

Class of service was changed.

Return to the previous level.

Recover Deleted Messages from a Mailbox

Recover a Mailbox's Deleted Messages provides deleted message recovery before system clean up occurs which occurs nightly. These prompts play:

To recover messages for a particular mailbox, enter the mailbox number followed by [#]. To go back, press [#]

Enter the mailbox number followed by [#]. If there are no deleted messages, the system plays:

No deleted messages were found for mailbox mmm
where mmm is the mailbox number.

If the mailbox has deleted messages, the system plays:

X deleted messages were found for mailbox mmm
where mmm is the mailbox number and X is the number of deleted messages.
Press [#] to go ahead with message recovery. Press [✳] to skip recovery.

Pressing [✳] plays Mailbox Administration. When [#] is pressed, the system plays:

Messages are being recovered
Return to the previous level.

Add a Mailbox

This option adds a mailbox to the system. Use this option when adding a new subscriber to the Digital Voice Processing system. These prompts play:

Enter the mailbox number to add followed by [#]. Press [#] to go back.
Enter the mailbox number followed by [#]. The system plays:

Mailbox was added.
Return to the previous level.

A template mailbox must have been defined in the registry. Registry items are changed from Laptop/PC Administration. Refer to Appendix A for additional information.

Delete a Mailbox

This option deletes a mailbox from the system. These prompts play:

Please enter the mailbox number to delete followed by [#].
Enter the mailbox number followed by [#].
The system plays:

You have selected to delete mailbox mmm. Press [#] to confirm or [✳] to cancel.
If [#] is pressed the system plays:

Mailbox was deleted.
Return to Mailbox Administration. If [✳] is pressed the system plays:

Mailbox will not be deleted.
Return to Mailbox Administration, then press [#] to return to System Administration.

Distribution List Administration

Distribution List Administration is where an administrator creates or deletes a distribution list. A distribution list is a collection of mailboxes assigned a group number. A message can be sent to a group of mailboxes using one list number. Thus, distribution lists simplify sending messages to groups of subscribers.

Add a New Distribution List

Adds a new distribution list. These prompts play:

> *Enter the system list to add followed by [#]. Press [#] to go back.*
> *Enter the system list number.*
> *List number yyy created.*
> *Press [✳] to add members to the list, or [#] to go back.*

When [✳] is pressed, access Edit a Distribution List for further instructions. Pressing [#] returns to the Distribution List Administration.

Delete a Distribution List

Deletes an existing distribution list. These prompts play:

> *Enter system list to delete followed by [#], or press [✳] for a directory of lists. Press [#] to go back.*
> *Pressing [✳] lists all system lists.*
> *You have reached end of the lists.*

After entering the list number to delete, the system plays:

> *You have entered the following list to delete yyy. Press [#] to confirm or [✳] to cancel.*

Pressing [#] plays:

> *List number yyy deleted.*

Pressing ✳] plays:

> *List not deleted.*

Returns to the beginning of Delete a Distribution List.

Edit a Distribution List

This option changes an existing distribution list and adds users to a current distribution list. These prompts play:

> *Enter system list to edit followed by [#], or press [✳] for a directory of system lists. Press [#] to go back.*
> *Pressing [✳] plays a directory of system lists.*
> *You have reached the end of the directory of lists.*
> *Go to the top of Edit a Distribution List.*

When the number to edit is entered, the system plays:

> *yyy, Press [#] to confirm or [✳] to cancel.*
> *Pressing [✳] returns to the top of Edit a Distribution List.*

When [#] is pressed, the system plays:

> *[1]listen to a directory of members in the list*
> *[2]add members to the distribution list*
> *[3]delete members from the distribution list*
> *[#]return to Mailbox Administration*
> *[#]return to System Administration*

Broadcast Message Administration

Broadcast Message Administration puts a broadcast message into a mailbox. By default, a broadcast message goes to every subscriber in the voicemail system. Broadcast Message Administration plays a currently recorded broadcast message or a new one. A system can have up to ten broadcast messages (0-9).

Broadcast messages are different from distribution lists in the following ways:

- Broadcast messages use less disk space.
- A broadcast message automatically enters a subscriber's mailbox. It plays automatically when a subscriber goes into their mailbox; the subscriber need not retrieve it.

This prompt plays:

You have x broadcast messages active.

Listen to Message

Plays an existing broadcast message. These prompts play:

Active broadcast messages are:...
Select the message number to play. To repeat selections press [✳]. When finished, press [#].

Pressing [✳] repeats the selections. Pressing [#] returns to the Broadcast Message Administration. Entering a message number plays that message, then returns to Broadcast Message Administration.

Create New Message

Creates a new broadcast message. These prompts play:

Available broadcast slots are...
Select which message number to create. To repeat selections, press [✳]. When finished, press [#].

Pressing [✳] accesses Create a New Message. Pressing [#] replays the available broadcast slots. Entering an available broadcast slot plays:

You have selected to create broadcast message number b
where b is the number you chose.

[1] send broadcast message
[2] listen to the recording
[3] cancel
[4] append to the recording
[5] re-record the message
[#] return

Cancel a Broadcast Message

This option cancels an already distributed broadcast message. These prompts play:

Active broadcast messages are...
Select the message number to delete. To repeat selections, press [✳]. When finished, press [#].
Pressing [✳] repeats the active messages. Pressing [#] returns to Broadcast Message Administration. Entering a number to delete plays:

Delete broadcast message number b. To confirm deletion, press [#]. To abort, press [✳].
Pressing [✳] plays:

Broadcast message not deleted.
Pressing [#] plays:

Broadcast message deleted.
Pressing [#] returns to Broadcast Administration.

System Administration

With this option, the administrator controls and can change the operation of the voicemail system, via the telephone.

Changing these settings from default values may cause erratic system operation and may require Laptop/PC Administration to correct.

Set Up Voice Lines

This option determines what functions are available on voice lines. It designates how lines are answered. Configure port numbers as part of the voice lines option. A port number is the voice channel on a voice processing system, such as 1-4 on a 4-port system and 1-8, or 1-8 on an 8-port system. Press 0 to configure all ports. These prompts play:

Please enter the port number to configure, or press [0] for all ports.

When the caller enters a port number, the system plays:

Port x is configured to run...

then plays the configuration of that line.

When the user enters [0] the system plays:

Press [1] to hear how each line is configured, or press [0] to continue.

When the caller enters [1], the system plays how each line is configured. When the caller enters [0], the system plays:

Enter the module you want to run.

The Enter Module to Run prompt provides these options:

[1] for Voicemail
[2] for Auto-attendant
[3] for Menu
[4] for Time Control
[#] to return

Voicemail

Pressing [1] plays:

> *You have selected Voicemail, press [#] to confirm, or [✳] to cancel.*
> *Please enter the mailbox to run, or press [#] to continue.*

Press [#] to prompt the user for the mailbox number

or

Enter the mailbox number to place the caller in a mailbox. This prompt then plays:

> *You are about to change your line settings, press [#] to confirm or [✳] to cancel.*

Press [#] to return one level or enter the phone system configuration file. The system plays:

> *Run code was changed. The system will now reset itself.*

Run code refers to the module you selected to run. The system reboots.

Auto Attendant

Pressing [2] plays:

> *You have selected Auto attendant, press [#] to confirm, or [✳] to cancel.*
> *Please enter the extension to run, or press [#] to continue.*

Press [#] to prompt the user for the extension number

or

Enter the extension number to send the caller to an extension. Then, this prompt plays:

> *You are about to change your line settings, press [#] to confirm or [✳] to cancel.*

Press [#] to return one level or enter the phone system configuration file. The system plays:

> *Run code was changed. The system will now reset itself.*

Run code refers to the module you selected to run. The system reboots.

Menu

Pressing [3] plays:

> *You have selected Menu, press [#] to confirm, or [✳] to cancel.*
> *Please enter the menu to run, or press [#] to continue.*

Enter a valid menu number to run. This prompt plays:

> *You are about to change your line settings, press [#] to confirm or [✳] to cancel.*

Press [#] to return one level or enter the phone system configuration file. The system plays:

> *Run code was changed. The system will now reset itself.*

Run code refers to the module you selected to run. The system reboots.

Time Control

Pressing [4] plays:

> *You have selected Time Control, press [#] to confirm, or [✳] to cancel.*
> *Enter the time control to run, or press [#] to continue.*

Enter a valid time control to run. Then, this prompt plays:

> *You are about to change your line settings, press [#] to confirm or [✳] to cancel.*

Press [#] to return one level or enter the phone system configuration file. The system plays:

> *Run code was changed. The system will now reset itself.*

Run code refers to the module you selected to run. The system reboots.

Select a Phone System

The Select a Phone System option changes the default phone system configuration. For more information on selecting phone systems, see *Section 2*. These prompts play:

> *Enter the three digit number for the phone system configuration file you want to load, followed by the [#], or press just [#] to go back.*

Press [#] to return one level or enter the phone system configuration file. The system plays:

> *You are about to replace your current configuration file with a new one. Press [#] to confirm or [✳] to cancel.*

Pressing [✳] plays:

> *Configuration file has not been changed.*

Press [#] to return one level or enter the phone system configuration file. The system plays:

> *Configuration file was changed. The system will now reset itself.*

The system reboots.

System Shutdown

The System Shutdown option shuts down the system. The following are the System Shutdown options:

- Shut down and park the system
- Shut down and reboot the system

For more information on these options, see the shutdown information in *Section 5*. These prompts play:

[1] shut down and park. The system plays:
The system will now reset itself.
The system shuts down.

[2] shut down and reboot. The system plays:
The system will now reset itself.
The system shuts down and reboots itself.

System Date and Time

Changes the system date and time. Changing the system date and time resets voicemail and drops callers. These prompts play:

Enter the two-digit month 01 through 12. Press [✳] to go back or [#] to cancel.

Enter the two-digit month.

01= January, 02-February, etc 12=December

Pressing [#] prompts for the month. Pressing [✳] the Setup Lines options play.

Please enter the two-digit day 01 through 31. Press [✳] to go back or [#] to cancel. Enter the two-digit day.

Pressing [#] prompts for the month. Pressing [✳] plays the Setup Lines options.

Please enter the four-digit year. Press [✳] to go back or [#] to cancel. Enter the four digits.

Pressing [#] prompts for the day. Pressing [✳] plays the Setup Lines options.

Please enter the two-digit hour 00 through 23. Press [#] to go back or [✳] to cancel. Enter the time in a 24-hour clock format, where 13=1:00p.

Pressing [#] prompts for the year. Pressing [✳] plays the Setup Lines options.

Please enter the two-digit minute 00 through 59. Press [✳] to go back or [#] to cancel. Enter the minute of the hour.

Pressing [#] prompts for the hour. Pressing [✳] plays the Setup Lines options. Tells the date and time and prompts for confirmation of the date and time entered.

Press [#] to confirm. Press [✳] to cancel.

Pressing [#] plays:

The system's date and time was changed. The system will now reset itself.

The system reboots. Pressing [✳] returns one level. Pressing [#] returns to the System Administration.

Functions and Programming Options

The table below lists the available functions and programming options for the Digital Voice Processing System. The columns to the right indicate which program contains the function or option, and who may make modifications.

Function / Programming Option	ECom	PC/Laptop Admin	On-line Admin	Mailbox Owner
General				
Select phone system		X	X	
Select PBX configuration		X	X	
Shutdown system	X	X	X	
Re-initialize system	X			
Set date and time		X	X	
Software version	X	X		
Disable system caching		X		
Fax detect setting		X		
Run Debug module	X			
Operator transfer settings		X		
Assign function module to voice lines		X	X*	
Command files	X	X*		
View logs	X	X		
Set owner send options		X		
Set owner edit options		X		
Administer broadcast messages			X	
Set message cascading		X		
Set call options		X		
Set call screening and waiting		X		X*
Set last options		X		
Administer system lists			X	

Table 4-2. Functions and Programming Options

Function / Programming Option	ECom	PC/Laptop Admin	On-line Admin	Mailbox Owner
Set pager / phone number notify		X		X
Registry				
Reset Registry to default	X			
Add Registry items	X	X		
Edit Registry items	X	X		
Edit Prompts				
Menu prompts			X	
System prompts			X	
Mailbox signature			X	X
Subscriber Programming				
Add subscribers		X	X*	
Delete subscribers		X	X*	
Edit subscribers		X	X*	
COS		X	X	
Name (for company directory)		X		
Password		X	X	X
Department		X		
Subscriber Mailbox				
Time control		X		
Operator		X		
Cascade to mailbox		X		
Play greeting action		X		
Action		X		X*
Record name			X	X*
Off premise notification		X		X*
Notification settings		X		

Table 4-2. Functions and Programming Options

Function / Programming Option	ECom	PC/Laptop Admin	On-line Admin	Mailbox Owner
Subscriber Extension				
Time control		X		
Transfer type		X		X
Screening and holding		X		X*
Subsequent actions		X		*
Administer personal lists				X
Administer guest mailboxes				X
Administer personal notepad				X
Recover deleted messages			X	
Record greetings				X
Standard				X
Busy				X
Time sensitive				X
Temporary				X
Class of Service				
Add COS		X		
Delete COS		X		
Edit COS		X		
Menus				
Add menu		X		
Delete menu		X		
Edit menu		X		
Time Controls				
Add time control		X		
Delete time control		X		
Edit time control		X		
* = limited or not the same				

Table 4-2. Functions and Programming Options

5 Laptop/PC Administration

Overview

Laptop/PC Administration is a Windows-based program for administering your Digital Voice Processing System. You may use Laptop/PC Administration or the telephony administration to configure the Digital Voice Processing System. This section refers to the Laptop/PC Administration.

Install Laptop/PC Admin Software

Installing the Laptop/PC Administration software requires one floppy diskette. Simply insert the diskette into the disk drive and run `setup.exe`, then follow the instructions on the screen.

Windows 3.1 and Windows 3.11 for Workgroups Setup

1. Select the Program Manager.
2. Select RUN from the menu.
3. Enter `A:\setup.exe` in the Open field.
4. Click OK.

Windows 95/98 NT Setup

1. Click Start on the task bar at the bottom of the screen.
2. Click Run from the Start menu.
3. Enter `A:\setup.exe` in the Open field.
4. Click OK.

Connect Cabling

The Digital Voice Processing System can be administered locally via a direct connection to a laptop/PC, or remotely using modems. If connecting the Digital Voice Processing System directly to the laptop/PC serial port, use the provided 9-pin null modem cable.

If connecting to the Digital Voice Processing System via modem, the modem must be attached to the Digital Voice Processing System as described in *Section 2*.

Communicate With the System

During a routine installation, the PC-based Admin program communicates with the Digital Voice Processing System. There are times when a more general purpose tool must be used that allows diagnosis of start-up / configuration problems and allows uploading and downloading of software to the system. To communicate with the Digital Voice Processing System at this *lower level*, a terminal communication program is required such as ProComm Plus™ or ECom. ECom is a communication application installed from the Windows Admin disk.

When using the terminal communications program, set the serial port parameters to 9600 baud, no parity, 8 data bits, and 1 stop bit. Some communications programs that run under Windows are too slow for the Digital Voice Processing System's high data transfer rate.

In this section, the term ECom indicates the terminal communications package you should be using.

Run Software

Perform these steps to begin running the Windows administration program:

Windows 3.1 and Windows 3.11 for Workgroups

In the Admin Group, double-click the Admin icon.

Windows 95/98 NT

Click Start. From the Startup menu, select Programs, Admin, then click the Admin icon.

Modem Connection

The Digital Voice Processing System supports remote maintenance via a modem. Many installations require that a modem be connected to the Digital Voice Processing System so remote maintenance and service can be performed. The Digital Voice Processing System requires a Hayes command set compatible modem that supports at least 9600 baud transfers. It also requires a modem that supports switch selectable settings.

During boot-up, the Digital Voice Processing System sends the necessary AT commands to the modem to set it for auto-answer and to suppress result codes. However, usually it is necessary to configure the modem using DIP switches to do the same thing. Once a modem is connected, the system must be restarted. During reboot, signals are sent to the modem to place it in auto-answer mode. Below are the commands sent to the modem:

```
@ECHO AT
@ECHO AT S0=1 Q1
```

If the modem requires different commands to place it in Auto-Answer mode, make changes according to the modem manufacturer's specifications.

The modem used by the Windows Admin program requires that result codes NOT be suppressed.

When the Digital Voice Processing System is parked or restarted, the modem drops the current connection. It is necessary to reconnect the modems after a park or reboot. If a system is parked, it must be connected with ECom (or a similar communications package).

When using a modem to communicate with a Digital Voice Processing System, the laptop/PC and the Digital Voice Processing System need customer-provided Hayes-compatible modems. Both modems must connect at 9600 bps. When a modem is connected to the Digital Voice Processing System, the first screen displayed is shown below. This screen prompts for the remote modem phone number with which to connect.

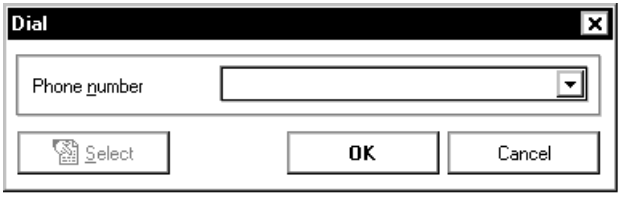


Figure 5-1. Modem Screen

If the Digital Voice Processing System does not detect a modem hookup, nor is it connected to a Digital Voice Processing System, an error screen displays indicating the system is not responding. When OK is clicked, the ComPorts Option screen displays for adjustment of settings as needed.

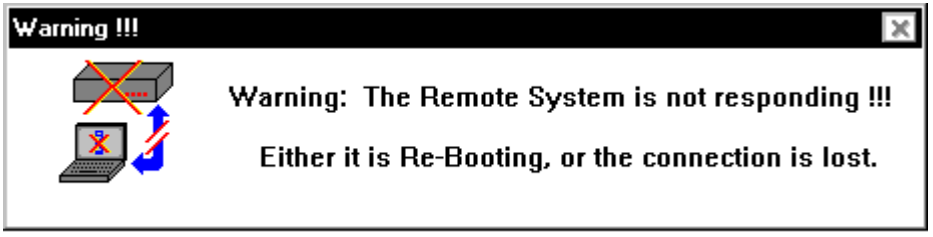


Figure 5-2. Modem Error Message

The following screen shows the File pull-down menu before dialing a remote modem. When the administration menu is displayed and an attempt to dial via modem is made, the File pull-down menu consists of the Dial and Exit options.

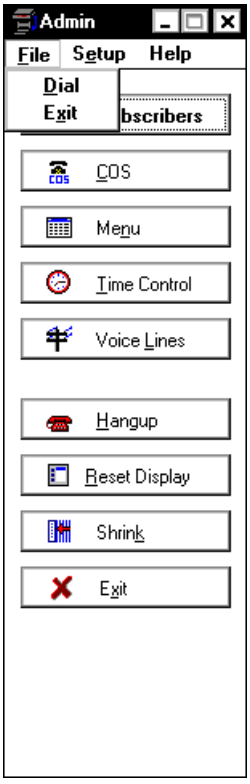


Figure 5-3. Modem File Menu

When an attempt to dial a remote modem is made, a Dial button is added to the main Digital Voice Processing System screen as shown below.

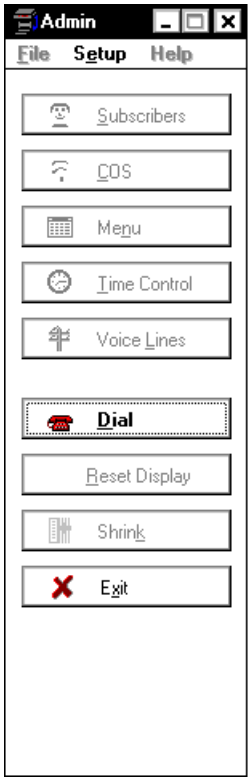


Figure 5-4. Dial Button

When connected to a remote modem, the Dial button changes to Hangup on the main Digital Voice Processing System screen as shown below.

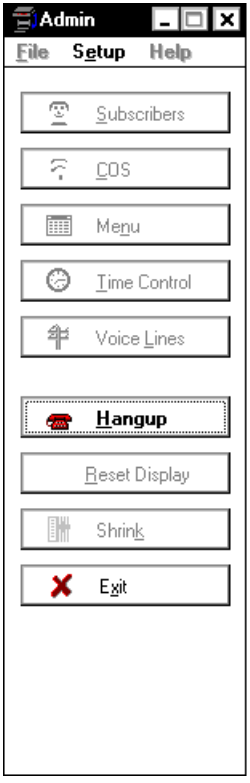


Figure 5-5. Hangup Button

Laptop/PC Connection

If the Digital Voice Processing System is not configured to a phone system, or if it is configured to a default phone system, the Default Phone System Configuration screen displays as shown.

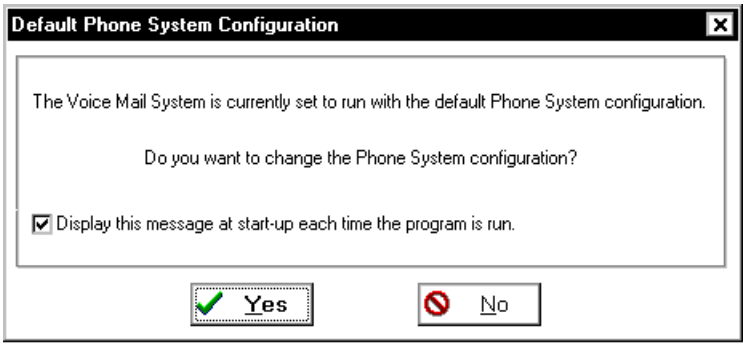

Default Phone System Configuration
The Voice Mail System is currently set to run with the default Phone System configuration.
Do you want to change the Phone System configuration?
Display this message at start-up each time the program is run.
Yes
No

Figure 5-6. Phone System Configuration Screen

Unchecking the *Display this message at start-up each time the program is run* option prevents the Default Phone System Configuration screen from displaying again. To display the screen again, select Setup, Advanced, Phone System Config Message from the Setup pull-down menu.

Running the laptop/PC administration software requires having the Digital Voice Processing System unit connected. If Yes is clicked on the Default Phone System screen, the system prompts to select the phone system. (Refer to the discussion on phone system setup later in this section.) Click OK, then double-click the phone system selection. When the confirmation screen displays, click Yes and the system reboots. After the system reboots, the Admin screen displays.

Clicking No also displays the Admin screen as shown in *Figure 5-7. Admin Screen*.

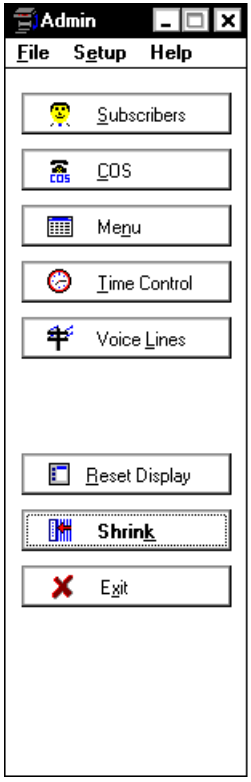


Figure 5-7. Admin Screen

Software Description

The following options are available:

- **Subscribers**
  Use this button to add, delete, and edit subscriber information.
- **Class of Service (COS)**
  Use this button to add, delete, and edit COS information.
- **Menu**
  Use this button to add, delete, and edit multi-level menu information.
- **Time Controls**
  Use this button to add, delete, and edit time control information.

- **Voice Lines**
  Use this button to administer voice lines.
- **Reset**
  Use this button to reset the current screen.
- **Shrink**
  Use this button to reduce the expanded screen to its default size.
- **Exit**
  Use this button to exit the laptop/PC administration program.

Menu items are also accessed using a pull-down menu.

Status Bar

The following screen illustrates the status bar located at the bottom of the Digital Voice Processing System option screens:

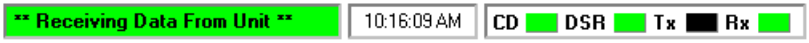


Figure 5-8. Status Bar

The status bar provides an explanation for each button on the main menu. For example, if the Time Control button is highlighted, the status bar reads: *Display Time Controls*

Note the four signal indicators at the bottom of the screen. The Carrier Detect (CD) option is lit as long as there is a carrier signal between the two modems, or between voicemail and the laptop/PC. The Data Send Ready (DSR) option is lit as long as there is a carrier signal between the two modems, or between voicemail and the laptop/PC. The CD and DSR are solid green on direct port connection. The Transmit (Tx) option blinks whenever data goes out, and the Receive (Rx) option blinks when data enters. If the connection is lost, the screen reduces and the following screen displays:

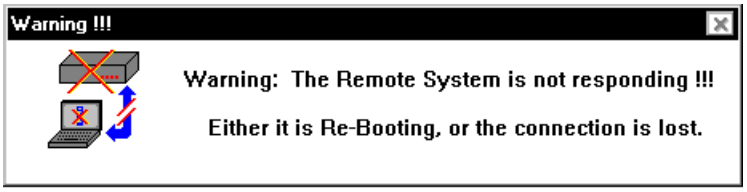


Figure 5-9. Remote System Not Responding Message

Subscribers

A subscriber is someone who owns an extension and mailbox on the voicemail system. The Subscribers menu displays mailboxes, extensions, and the names of subscribers. To display this menu, press the Subscribers button, or select Setup, Subscribers from the Setup pull-down menu. Then, click Insert to add a subscriber. Highlight an existing subscriber and double-click to edit it. Highlight a subscriber and click Delete to delete it.

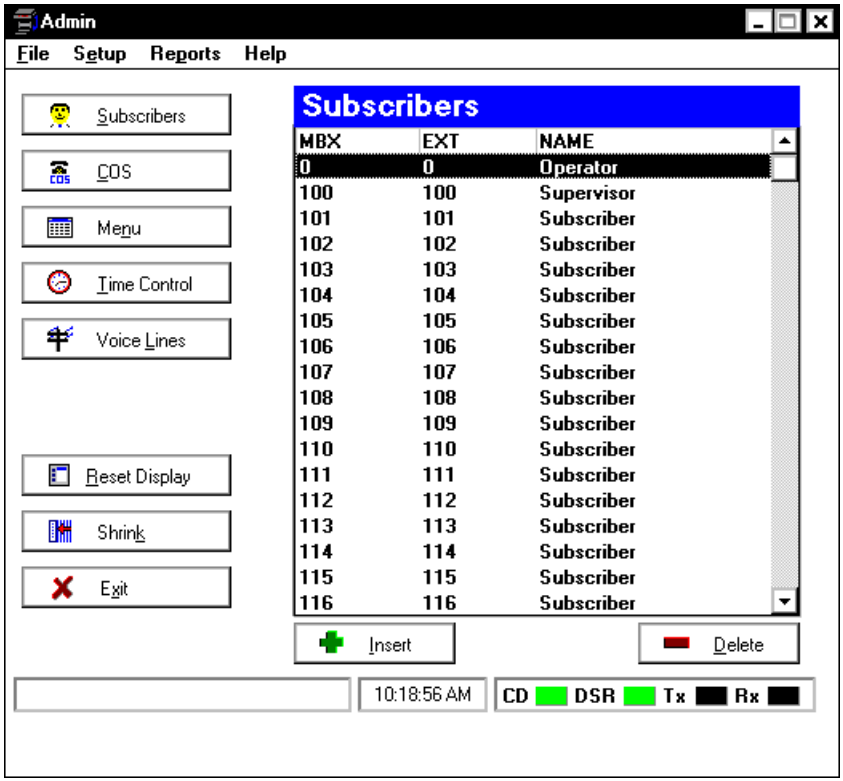


Figure 5-10. Subscribers Screen

As part of the Subscribers option, insert or delete a subscriber by clicking the corresponding buttons as illustrated by the following screens.

Create Subscribers

The screen below shows the Insert Subscribers option. To access this screen, click the Insert button from the Subscribers screen.

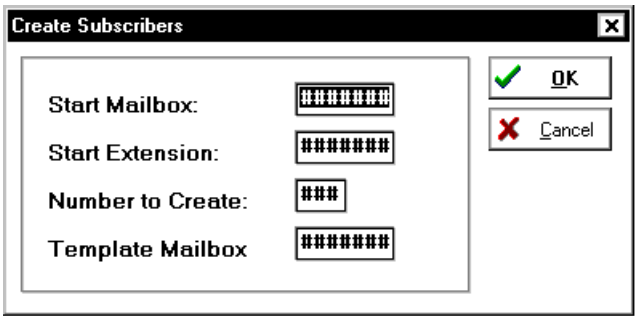


Figure 5-11. Create Subscribers

Start Mailbox

Enter the subscriber's mailbox number. Typically this is the person's extension.

Start Extension

Enter the extension to which to link this mailbox.

Number to Create

Number of mailboxes to add. Only use when creating multiple mailboxes.

Template Mailbox

When a subscriber is created and another new subsciber will have similar mailbox/extension features, enter the previously created subscriber's mailbox number. This copies all mailbox and extension settings to the new subscriber for easier editing.

Delete Subscribers

The following screen shows the Delete Subscribers option. To access this screen, click the Delete button from the Subscribers screen.

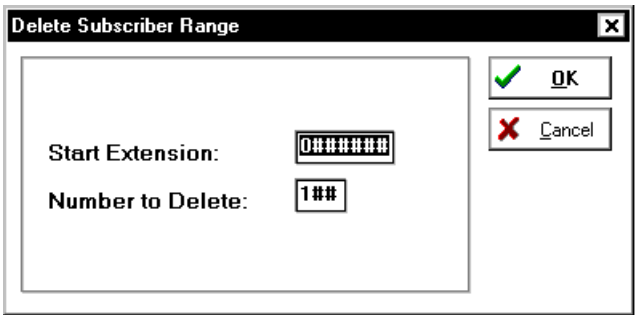


Figure 5-12. Delete Subscriber Range

Start Extension

Select the first mailbox in the range to delete.

Number to Delete

Number of mailboxes to delete.

Edit Subscribers

While displaying the subscribers screen, double-clicking one of the subscribers provides editing and verification of passwords and user names.

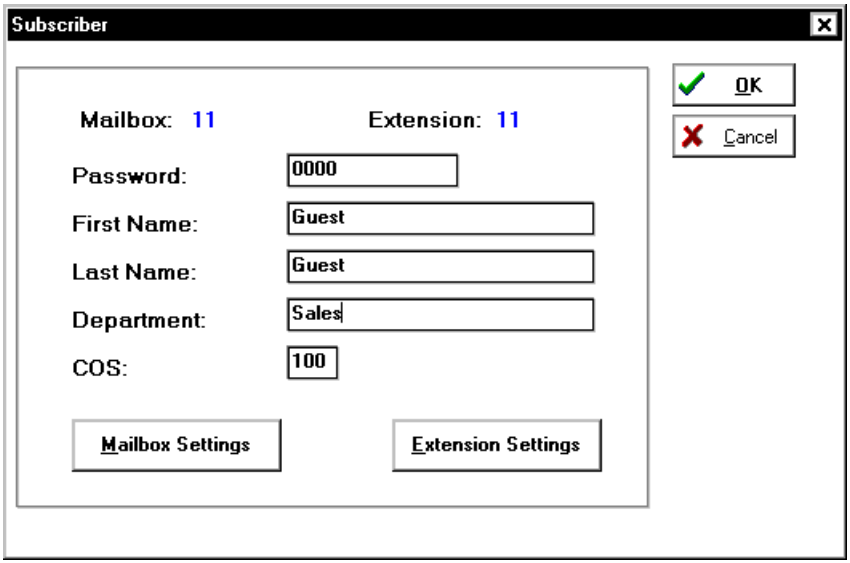


Figure 5-13. Edit Subscriber

Password

The password provides the user with access to their mailbox. We recommend setting the password to something that easily remembered. The default password is 0000.

First Name and Last Name

Change as needed. The Last Name field contains the name used in the directory.

Department

Enter the department or area in which the employee works.

Class of Service

Select the Class of Service to associate with this mailbox. Note that if the Class of Service field is blank, the voicemail system defaults to the last COS used by the system. In a system that uses multiple COSs, errors could arise. Assign a Class of Service to each extension to avoid potential problems.

From the Subscribers screen, click the Mailbox Settings or Extension Settings.

Mailbox Settings

Mailbox Settings let you customize your mailbox options. For example, actions and notification options.

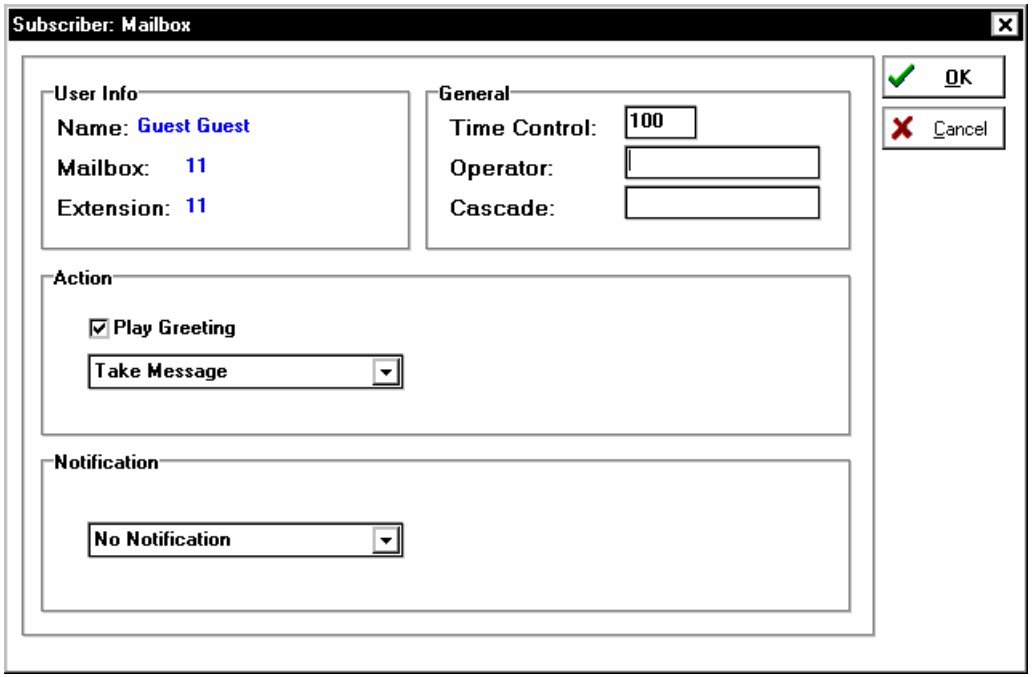


Figure 5-14. Subscriber Mailbox

Time Control

Calls are often handled differently in the evening, during the weekend, or on holidays than during regular business hours. The time control function defines a set of alternative actions that the Digital Voice Processing System performs for a given time setting. Time controls are created by selecting Time Control from the Setup menu. Set Time Controls to NONE if this function is not used.

Use the Time Control option to configure date and time sensitive mailbox greetings. Refer to *Section 7* for additional information.

Use the Time Control option only with help from Technical Support.

Operator

Enter a personal operator for the mailbox that is used when a caller dials [0] while connected to the mailbox. The call is transferred to an alternate extension instead of to the system-wide operator. This is used to transfer calls to a personal assistant.

Cascade

Message cascading is a feature that copies or moves messages left for the originating mailbox to another mailbox. To use message cascading, the Class of Service (COS) for the originating mailbox must be configured to allow the feature. Within the mailbox settings, only enter the destination mailbox. This feature is inoperable until the COS settings are properly administered. Typical uses include archiving and notification of no response to messages left in a mailbox (i.e., for customer service).

Mailbox Action

Click Play Greeting if the Digital Voice Processing System plays the greeting recorded for this mailbox when it is accessed. Use the drop down list to select the actions performed by the mailbox when a message is left. These actions function as follows:

Take a Message

Records messages in the mailbox for later retrieval.

Forward to Mailbox

Sends the caller to an alternate mailbox where a message may be left. Notification and MWI rules of the *forwarded to* mailbox apply.

Forward to Extension

Sends the caller to an extension. Extension settings of the *forwarded to* extension apply.

Forward to Menu

Sends the call to a menu where additional options may be available to the caller. Refer to the discussion on menus later in this section for more information.

Forward to Time Control

The Digital Voice Processing System executes the assigned time control and takes the appropriate action. Use caution when selecting this option.

Forward to Module

Automatically runs another module when the mailbox is accessed. Special applications only.

Mailbox is Off

Disables the message capability for a mailbox. This option plays *Mailbox is off* to the caller.

Mailbox is Full

Notifies the mailbox owner that the mailbox cannot record any new messages until old ones are deleted. Plays a message to the caller saying the mailbox is full.

Notification (External)

Notification refers to external numbers (e.g., pager, mobile, etc.) Select the type of notification the Digital Voice Processing System uses when a message is left in the mailbox. Notification options include:

No Notification

Disables message notification.

Immediate Notification

Sends notification immediately upon receiving messages.

Timed Notification

Sets a time to notify mailbox owner of new messages.

Urgent Notification

Instructs the Digital Voice Processing System to send notification only if the message left is marked urgent.

Phone Number

Enter the phone number to dial for notification.

Do not enter 9, 1 for any number.

If you have an integrated system, do not set notification to call an internal extension because the notification message could be left in the extension owner's mailbox. This causes the Digital Voice Processing System to send another notification message, creating a continuous loop.

Pager Notification

When selecting a notification method, a Pager Notification checkbox displays and is checked if the notification number is a pager. Click OK before exiting this window.

Extension Settings

For Extension Settings, return to the Edit Subscribers screen. Then, click Extension Settings to edit the actions for mailbox numbers and to change transfer options and time controls.

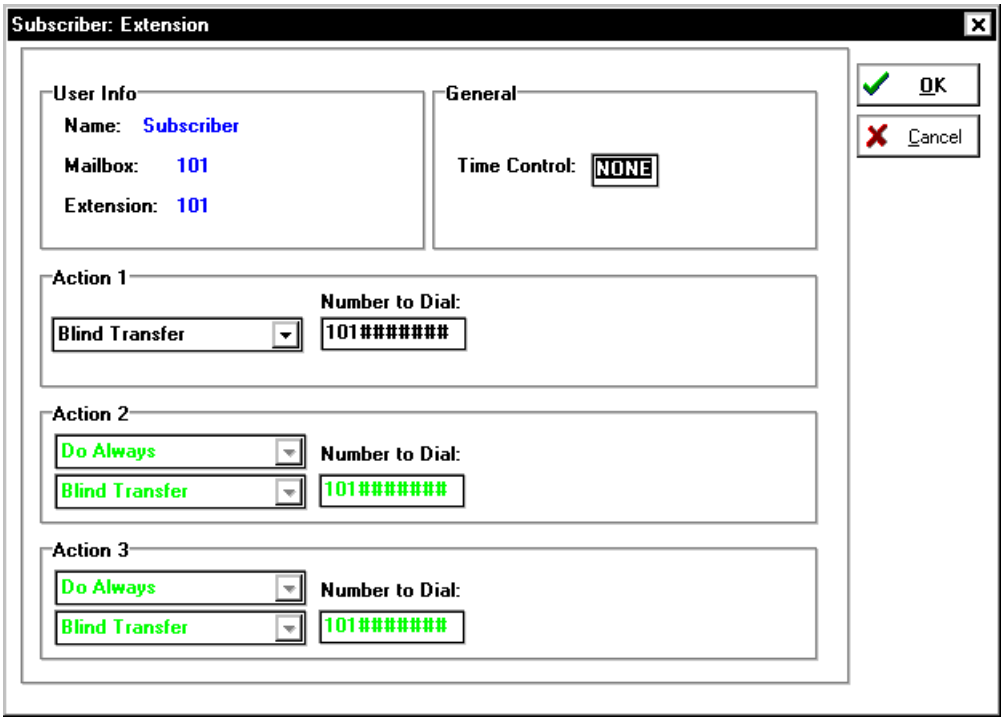


Figure 5-15. Subscriber Extension

Time Control

Calls are often handled differently in the evening, on weekends, or on holidays than during regular business hours. The time control function defines a set of alternative actions that the Digital Voice Processing System performs for a time setting. Time controls are created by selecting Time Control from the Setup menu. If Time Controls are not used, set to NONE.

Use this option only with help from Technical Support.

Actions

The Digital Voice Processing System provides three action fields that control how the system handles incoming calls. The Digital Voice Processing System refers to these options in a cascading order. That is, the first field has precedence over the second, and the second field has priority over the third. For example:

1 An incoming call is answered by the Digital Voice Processing System.

2 If the supervised transfer option was selected, the Digital Voice Processing System checks the first action for instructions on how to handle the call.

3 The Digital Voice Processing System performs a supervised transfer to the extension.

4 The line is busy so the call returns to the Digital Voice Processing System.

5 The Digital Voice Processing System checks the second Action for instructions on how to handle a busy signal. The forward to voicemail option was selected.

6 The Digital Voice Processing System sends the call to the appropriate voice mailbox.

Fields associated with each Action change to reflect the Action selection. For example, if *Supervised Transfer* is selected in the Action field, the field to the right of it changes to *Number to Dial*. If the Action selection is set *Forward to Menu*, the field changes to *Menu* and accepts the name of the menu to which calls are sent.

Action 1

Blind Transfer

Indicates an unsupervised transfer to the requested extension.

Supervised Transfer

The Digital Voice Processing System monitors call transfers to determine whether the called extension is busy or is not being answered. If the call is not answered, the Digital Voice Processing System refers to the subsequent Action entries (Action 2) for instructions on handling the call. Only one transfer type (Supervised or Blind) is selected at a time.

Screen Caller

When a person dials an extension through the auto attendant, the call screening feature prompts the caller to state his name. The Digital Voice Processing System plays the caller's name to the extension owner before the call is actually transferred. The extension owner can accept or reject the call, or send it to another extension or voice mailbox. This option works only with Supervised Transfer.

Holding Allowed

Lets the caller hold on the line if the called party is busy. The caller hears:

> *I'm sorry, [extension's name] is busy. If you would like to hold, press [1]. To try another extension or leave a message for this extension, press [2].*

This option works only with Supervised Transfer.

Forward to Mailbox

Forwards calls to the specific mailbox entered in the Mailbox field. Usually this is the called extension's personal mailbox.

Forward to Extension

Forwards calls to the extension entered in the Extension field.

Forward to Menu

Forwards calls to the menu entered in the Menu field. Refer to the discussion of menus later in this section for additional information.

Forward to Module

Forwards callers to a custom script module.

Consult Technical Support before selecting this option.

Forward to Time Control

Runs the designated time control file and performs the actions designated for the current time. Refer to the discussion of time controls later in this section for additional information.

Action 2 and Action 3

Available options depend on the selection for Action 1. For example, if *Forward to Mailbox* is selected, enter the mailbox number. After selecting Action 1 from the dropdown list, complete the action by completing any fields to the right of it. When Supervised Transfer is selected as Action 1, Action 2 box becomes active. When Action 1 is supervised transfer and the transfer resulted in a Busy or No Answer condition, Action 2 setting specifies what happens next. Invoke Action 2 when the following conditions exist for the Action 1 supervised transfer:

Do Always

The action always occurs.

Only On Busy

The Digital Voice Processing System uses this option if the previous transfer results in a busy signal.

Only On No Answer

The Digital Voice Processing System uses this option if the transferred call was not answered.

The above conditions apply when setting up Action 3.

Class of Service (COS)

Class of Service involves features and settings applied to a subscriber group. The Class of Service (COS) screen displays the COS name and description. To begin any COS operation, click the COS button on the toolbar or select COS from the Setup menu.

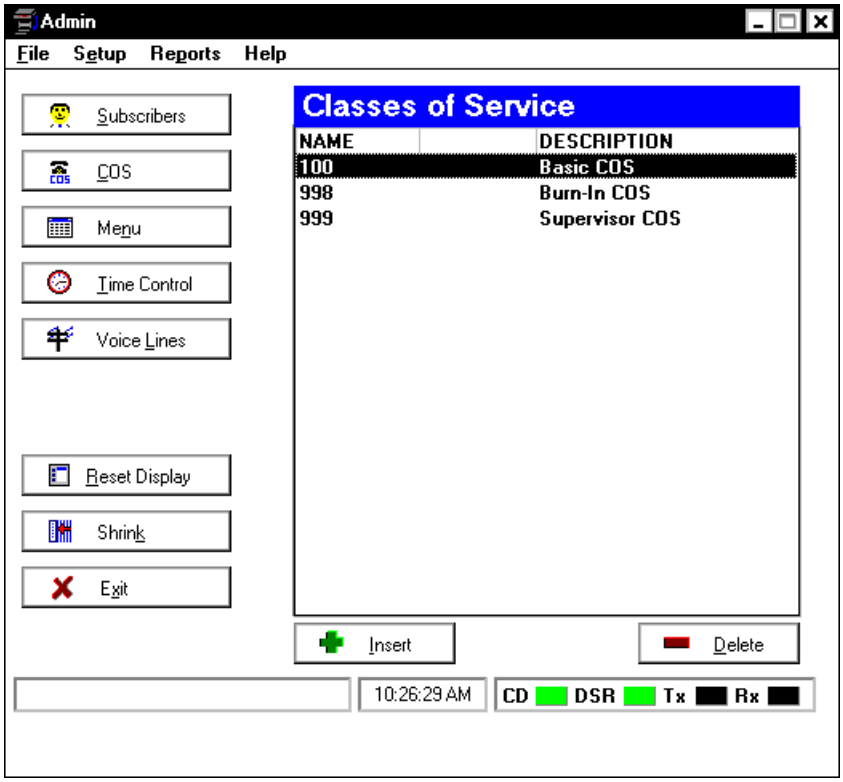


Figure 5-16. Class of Service Screen

The Digital Voice Processing System mailboxes and extensions are associated with a Class of Service (COS) that defines their attributes. All mailboxes and extensions with the same COS operate identically in terms of options available to users. Grouping mailboxes and extensions into classes of service provides a way to change options for all mailboxes and extensions in the same class simultaneously.

By supporting multiple COSs, the Digital Voice Processing System lets you provide users with options to system features on an as needed basis. Create a template COS to use when creating more than one COS.

After selecting Class of Service from the Setup menu or clicking the COS button on the tool bar, click Insert to add a COS or Delete to delete the COS. Enter a name for the COS, using a 3-digit number, then click OK. The COS screen displays. Double-click the COS just created. The Edit COS dialog box displays. Define the Class of Service.

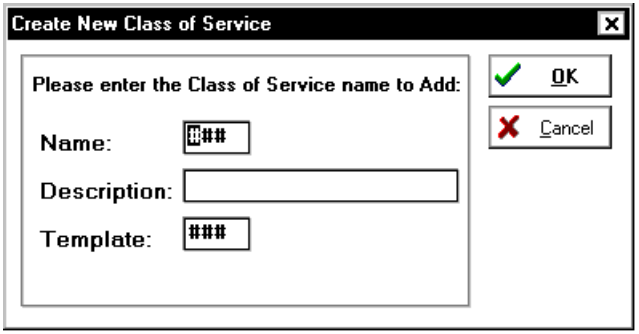


Figure 5-17. Create New Class of Service

When creating a new COS or editing an existing COS, click the tab corresponding to the parameters to change. Once a category is selected, another category is selected by clicking the page controls (Next, Prev) at the bottom of the screen, or by clicking the desired tab.

Within Class of Service, double-clicking COS displays a window with the following tabs:

- General
- Message
- Maintenance
- Notification
- Auto Attendant

General Tab

The General tab sets the desired general Class of Service values.

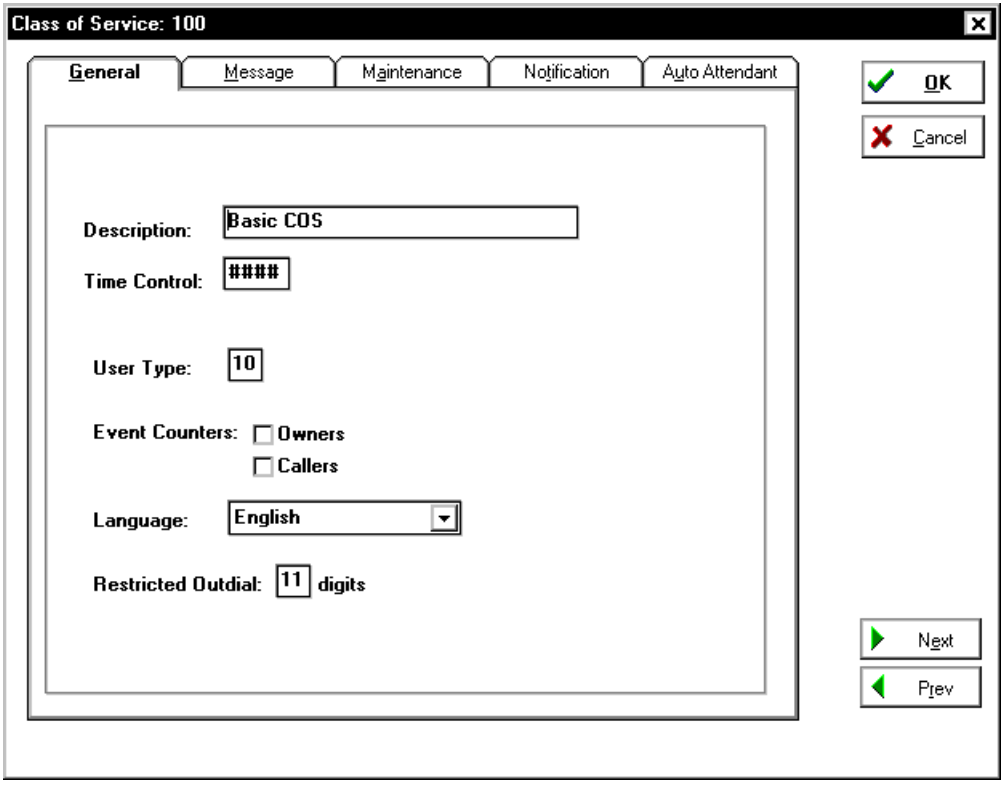


Figure 5-18. Class of Service General Tab

Description

Descriptive text (up to 30 characters) to help identify the COS in other operations.

Time Control

Calls are often handled differently in the evening, on the weekend, or on holidays than during regular business hours. The time control function defines a set of alternative actions that the Digital Voice Processing System performs for a time setting. Creat time controls by selecting Time Control from the Setup menu. If Time Controls are not used, set to NONE.

Use this option only with the help of Technical Support.

User Type

Set user type to 99 when granting system administrator access. For all other uses, set the user type to 10. Types 02-98 are not used.

Event Counters

Set these counters to off if an overview of system usage is not needed.

Owners

Check **Owners** to maintain a count of mailbox/extension maintenance accesses by the mailbox owner.

Callers

Check **Callers** to maintain a count of mailbox/extension access by callers (non-owners).

Language

Mailbox and extension prompts play in the selected language.

Restricted OutDial

Disables long distance dialing from the extension or from mailbox notification by entering the number of digits required for local calls (typically 7 or 10).

Message Tab

Sets values for messages in the Digital Voice Processing System.

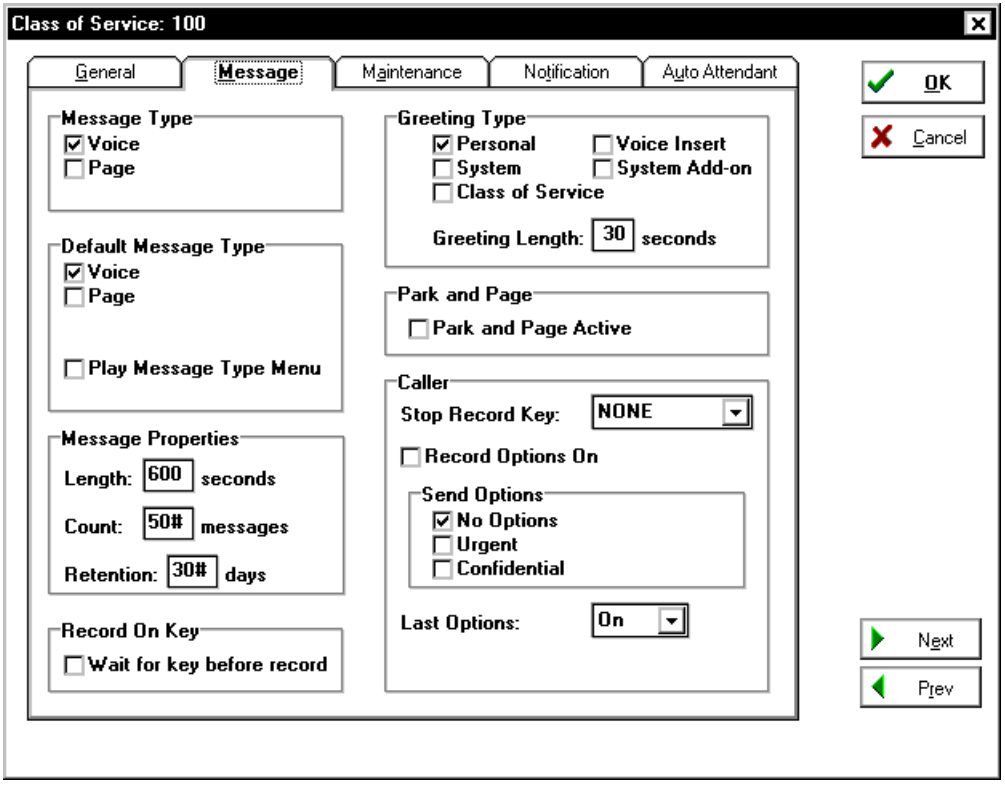


Figure 5-19. Class of Service Message Tab

Message Type

The Digital Voice Processing System mailboxes store voice or page messages.

Voice

Voice is the most common message type and is typically the only option selected which lets callers leave a voice recording for the called party. If mailboxes using this COS wish to receive numeric page messages, check the Page option.

Page

This option lets callers leave a numeric message. Note that a single mailbox can store a combination of message types. Mailboxes set for voice messages can be notified by a numeric pager. This setting applies only to inbound messages, not the notification type. If more than one message type is selected, choose one for the default.

Default Message Type

If the mailbox uses both message types and the caller does not select one, **Default Message** determines which type the system records.

Play Message Type Menu

Select this option if the Digital Voice Processing System presents the caller with a menu such as: *To leave a voice message, press [1]; To leave a page message, press [2]*. Deselect this option if the mailbox owner handles access to message type options in the mailbox greeting.

Message Properties

Length

Determines the time allocated to a message. After the specified number of seconds elapses, the caller is presented with the Send Menu, as if they had pressed a key to stop recording. The recommended length is 120 seconds.

Count

Determines the maximum number of messages stored in a mailbox. When the number of messages in a mailbox exceeds this parameter, the mailbox plays a message saying it is full. No further messages are permitted until one or more messages in the mailbox is deleted. A maximum of 50 messages is recommended.

Retention

The Digital Voice Processing System automatically deletes messages stored longer than a specified amount of time. Thirty days is the recommended default retention period but can be extended or shortened, depending on specific needs.

Record On Key

Omit this to have the Digital Voice Processing System automatically begin recording a voice message. When used, the caller must press a key for recording to begin.

Greeting Type

Select from the following types of pre-recorded messages or prompts used when greeting a caller:

Personal

A message played to a calling party before a message is recorded to a mailbox. If the owner does not record a personal greeting, the system greeting (default) is used.

System

A generic message used when no personal greeting is recorded. If the Personal and System greetings are activated, the Digital Voice Processing System plays the personal greeting when one has been recorded.

Class of Service

A single greeting that plays for all mailboxes sharing the same Class of Service. This is done to conserve disk space by eliminating the need for each mailbox to have its own greeting prompt.

Voice Insert

A COS greeting consists of the Class of Service prefix prompt, a name prompt, and a Class of Service suffix prompt. Voice Insert is often used to personalize a Class of Service greeting and limit the disk space used.

System Add-On

A shorter version of the system default greeting that follows a personal greeting. This greeting says *Begin speaking at the tone. To stop recording press any key, etc*. whereas the regular system greeting says *The person you have tried to reach is unavailable, begin recording...*

Greeting Length

Enter the time for each greeting in seconds.

Park and Page

If enabled, the following occurs: when a call comes into a mailbox and during the mailbox greeting the caller presses 7, the caller is transferred to a park location and the system initiates a company-wide broadcast page for the mailbox owner.

The mailbox greeting must include instructions for dialing [7] to access Park and page. Park and Page is not available on all systems.

Stop Record Key

Activates the one-key urgent message send feature. With this option, when an outside caller presses 8 to end recording a voice message, the message is marked urgent, sent, and the caller proceeds to Last Options.

The mailbox greeting must include instructions for dialing [8] for urgent messages.

Record Options On

The caller presses a key after leaving a voice message then hears the following options:

Press [1] to send the message
Press [2] to play the message
Press [3] to cancel
Press [4] to append the message
Press [5] to re-record the message

Send Options

Select Urgent, Confidential, or both if callers can specify options for messages they leave.

Urgent

Messages are preceded by an Urgent prompt that triggers immediate notification. These messages play first in a group of messages.

Confidential

Messages cannot be forwarded and are preceded with a warning to pick up the phone if messages are played on a speaker phone.

Last Options

Determines system actions once a caller leaves a message.

On

If Last Options is set to On, the Digital Voice Processing System plays default menu options. Default menu options are: *To access another mailbox, press [1]. To access an extension, press [2]. To disconnect, press [9]. To transfer to an operator, press [0].*

Off

If Last Options is set to Off, the Digital Voice Processing System plays *thank you* and hangs up.

Menu

If Last Options is set to menu, the Last Options Menu plays. Note that setting this option off limits a caller's ability to navigate the system.

Maintenance Tab

Determines the modifications users can make to their personal mailboxes.

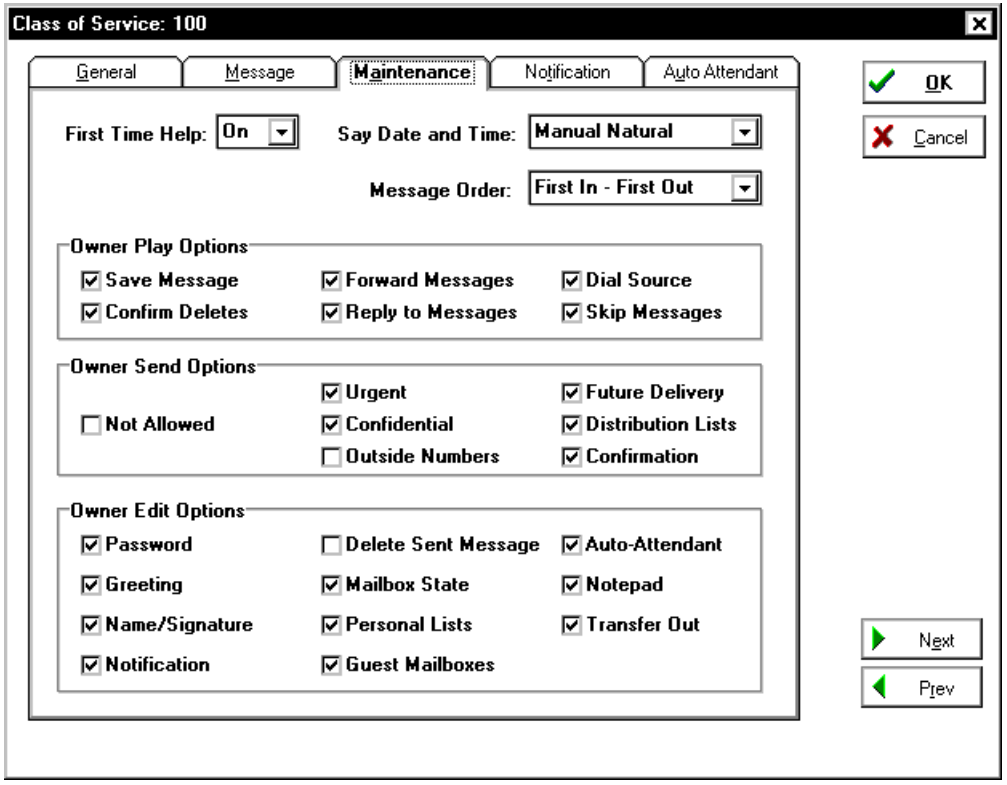


Figure 5-20. Class of Service Maintenance Tab

First Time Help

New users are prompted to record essential parameters such as a mailbox greeting, mailbox name, and a password.

Say Date and Time

The Digital Voice Processing System announces the date and time a message was received.

Manual Natural

The user must press a key to hear the date and time. Natural means the date and time is said in general terms; for example, Monday or yesterday. Press [8] after the message plays.

Manual Full

The user presses a key to hear the complete date and time. For example, Monday, February 28, 1998, at 7:00 p.m. Press [8] after the message plays.

Automatic Natural

Date and time play automatically at the beginning of each new message. The user need not press any keys.

Automatic Full

Complete date and time play automatically. The user need not press any keys.

Message Order

Determines order in which messages play. Message order is chronological as follows:

First In-First Out

The first message left plays first.

Last In-First Out

The last message left plays first.

Owner Play Options

Mailbox owners have several options for handling played messages. This makes mailbox management as simple or as sophisticated as desired. These options are:

Save Messages

Press [2] to save messages for later retrieval.

Confirm Deletes

Requires users to press [#] after pressing [3] to delete messages. This is used as a safeguard against accidental deletion.

Forward Messages

Press [4] to forward messages to other mailboxes or to an outside number.

Reply To Messages

Press [5] to reply to a message.

Dial Source

Connects to the person who sent the message.

Skip Messages

Press [6], then [3] to skip a message while listening to messages.

Owner Send Options

Determine the functions available to users when sending messages from their mailbox:

Not Allowed

Creates simple mailboxes that cannot send a message.

Urgent

Users can assign urgent status to a message. Urgent messages are preceded by an Urgent prompt that trigger immediate notification. These messages play first in a group of messages.

Confidential

Specifies that a message cannot be forwarded and is preceded with a warning to the recipient that the message is confidential.

Outside Numbers

Sends a message to an outside number. Use this option with caution since the Digital Voice Processing System attempts to call an outside number and play the message.

Future Delivery

Delivers messages at a future time and date.

Distribution Lists

Sends messages to a system-wide list that is maintained by the administrator.

Confirmation

Lets the user request receipt information for a marked message. The system notifies the sender when the message is listened to, or if the message is not played before the notification attempts expired.

Owner Edit Options

Determine the mailbox customization available to users within this COS:

Password

Restricts unauthorized access to the mailbox. Lets the mailbox owner change the mailbox password. Typically, this option is off only when a mailbox is for temporary use.

Greeting

Lets a mailbox owner edit their greeting and typically, is enabled. The greeting is a message played to a calling party before a message is recorded to the mailbox.

Name/Signature

Lets an owner change the mailbox name used in prompts associated with the mailbox. Name / Signature is an identifier for a mailbox and is used when calls are transferred, and when messages are forwarded, replied to, or sent.

Notification

Lets an owner change notification settings such as the extension or number to call, and the time of notification (such as a pager). Notification is the indication of new messages in mailboxes and does not affect message waiting indicators on telephones.

Delete Sent Message

Lets a mailbox owner *unsend* messages sent to another local mailbox. The system prompts the owner for the destination mailbox, then checks for unheard messages from the owner that are in the destination mailbox. Each message plays and lets the owner selectively delete them.

Mailbox State

Lets an owner turn the mailbox off, set it to greeting only, forward calls to an extension, forward calls to a mailbox, or forward calls to menu. Turn this option off when a simple mailbox is desired or there is a possibility of activating erroneous forwarding.

Personal Lists

Lets a user create up to 10 personal lists and maintain them via the telephone. Personal distribution lists are numbered from 0 to 9. Each contains personalized mailbox lists addressed as a group to simplify delivery.

Guest Mailboxes

Lets an owner communicate with a guest who has no mailbox on the system. System mailboxes can have up to 10 guest mailboxes. Mailbox owners administer guest mailboxes and assign unique numbers to each guest. Owners may send messages to guest mailboxes following the prompts for sending to other address types. Guests press [4] to retrieve messages during the owner's greeting. The guest then enters their unique number (phone number or social security number, etc.), followed by [#]. The guest may then retrieve messages sent by the mailbox owner and reply to the mailbox owner.

Auto-Attendant

Lets a mailbox owner edit extension settings. The mailbox owner can also change forwarding and the transfer type.

Notepad

Gives the mailbox owner access to a personal voice note pad that is referenced with an index. The index can be any 8-digit number with an associated voice file. For example, a personal note pad can be used for saving phone numbers and addresses.

Transfer Out

Lets a mailbox owner transfer to other extensions or mailboxes. Turn off this option when the auto attendant is not used. At the top level of the mailbox owner options, a caller can press 0. The system then plays *To access another mailbox, press [1]. To access an extension, press [2]*.

Notification Tab

Describes notification options that tell mailbox owners when they have new messages.

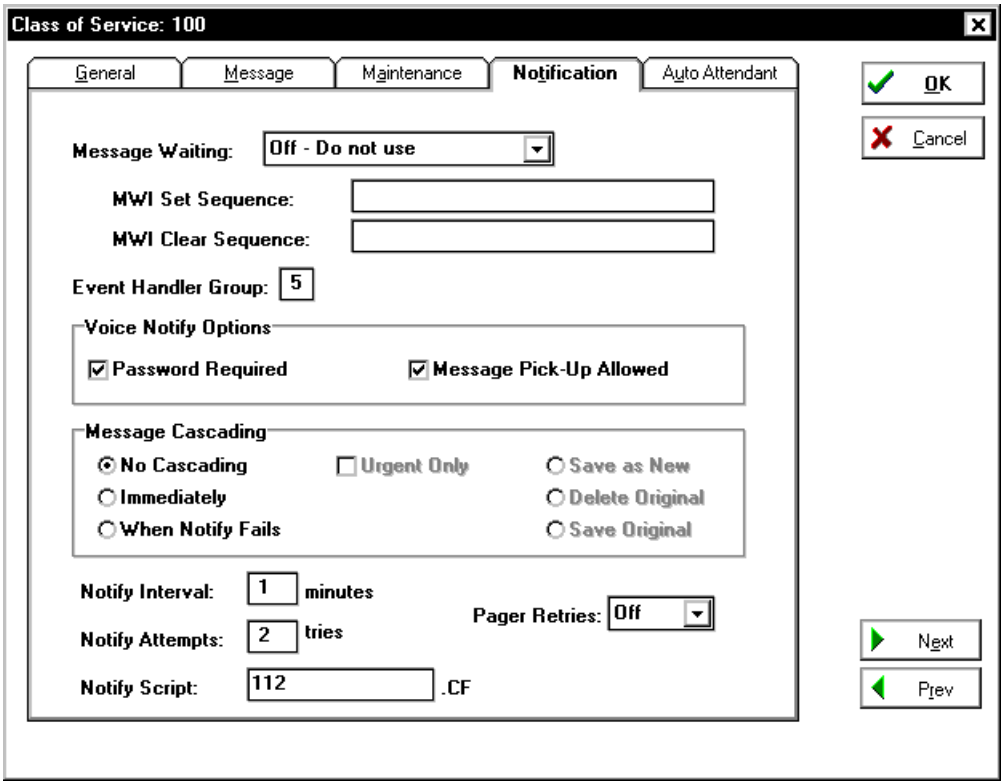


Figure 5-21. Class of Service Notification Tab

Message Waiting

The Digital Voice Processing System sends message waiting commands to telephone systems that support message waiting lights or similar notification devices.

Off - Do Not Use

Do not light the Message Waiting Indicator (MWI). An example is a mailbox without an internal telephone.

After First New Message

Only sends commands to the phone system for notification after the first new message.

After Every Message

Sends command after each new message.

Message Waiting Indicator Strings - MWI Set Sequence, MWI Clear Sequence

Message Waiting Indicator strings are available and can be modified in the Digital Voice Processing System, however, they have no affect on the system. This feature is handled by the digital communications with the phone.

Event Handler Group

Event handler groups control notification settings like message waiting and pager notifications. On a two-line system, line two is the notification line by default. On all other systems, the last system line is for notification. You can program the Digital Voice Processing System on a Class of Service basis (in the Notification Options dialog box) to use only pre-selected lines for outgoing notification.

Do not change event handler groups without assistance from Technical Support.

Voice Notify Options

Password Required

Forces the owner to enter a password to retrieve messages.

Message Pick-Up Allowed

Allows message retrieval. Note that allowing message retrieval without a password can undermine the privacy and mailbox security. Also, do not use voice notification on systems using blind or release transfers.

Message Cascading

Gives the Digital Voice Processing System great flexibility when delivering a message. Any incoming message, depending on the cascade setting, can be redirected to other mailboxes.

No Cascading

Set to Off to disable this function.

Immediately

Cascading begins immediately, allowing storage of duplicate messages in several mailboxes.

When Notify Fails

Forwards the message to another mailbox only when the notification fails and the mailbox owner has not retrieved the message.

Urgent Only

Cascades only those messages marked urgent.

Original Message - Save as New, Delete Original, Save Original

These options are available when Message Cascading is set to Immediate or When Notify Fails. Typically, set this to Save as New. Setting this option to Save Original saves the message in the original mailbox once forwarding is complete. Setting this option to Delete Original deletes the original message from the mailbox once forwarding is complete.

Notify Interval (External)

Determines the time interval between notification attempts until the owner retrieves the message. This number is defined in the mailbox notification settings and is measured in minutes, with a maximum interval of 999 minutes.

Notify Attempts (External)

Determines how many times the Digital Voice Processing System attempts to notify a mailbox owner after receiving a new message. This number is defined in the mailbox notification settings and can be a maximum of 999.

Notification attempts continue as long as there is a new message in the mailbox.

Notify Script

Complex notification scripts are created on a per Class of Service basis. Use this option only if a notification script is already written. The Digital Voice Processing System provides 20 notification scripts that are similar in function. There are two groups of command files: 0XX.CF and 1XX.CF. The 0XX.CF files are: 006.CF, 008.CF, 010.CF, 012.CF, 014.CF, 016.CF, 018.CF, 020.CF, 022.CF, and 024.CF. The 1XX.CF files are: 106.CF, 108.CF, 110.CF, 112.CF, 114.CF, 116.CF, 118.CF, 120.CF, 122.CF, and 124.CF. The number in each name represents how long after dialing the paging service the Digital Voice Processing System waits before it sends the mailbox number.

All notification scripts send the mailbox number, ✳, an urgent message count, another ✳, a new message count, another ✳, and the saved message count. For example, if mailbox 123 is being notified and has 1 urgent new message, 2 non-urgent new messages and 15 saved messages, the following is sent: 123✳1✳2✳15. Some pagers display ✳ as -, so the display could look like: 123-1-2-15. The difference between 0XX.CF and 1XX.CF files is how the script handles messages forwarded to a mailbox. For more information regarding notification scripts, see *Appendix B*.

Pager Retries

Disables pager retries but leaves all other retry options enabled. Since most pagers have memory and reminder features, the owner is not repeatedly paged for the same message. Pager retries are directly related to Notify Attempts.

Auto Attendant Tab

Provides information on several automated operations within the Digital Voice Processing System.

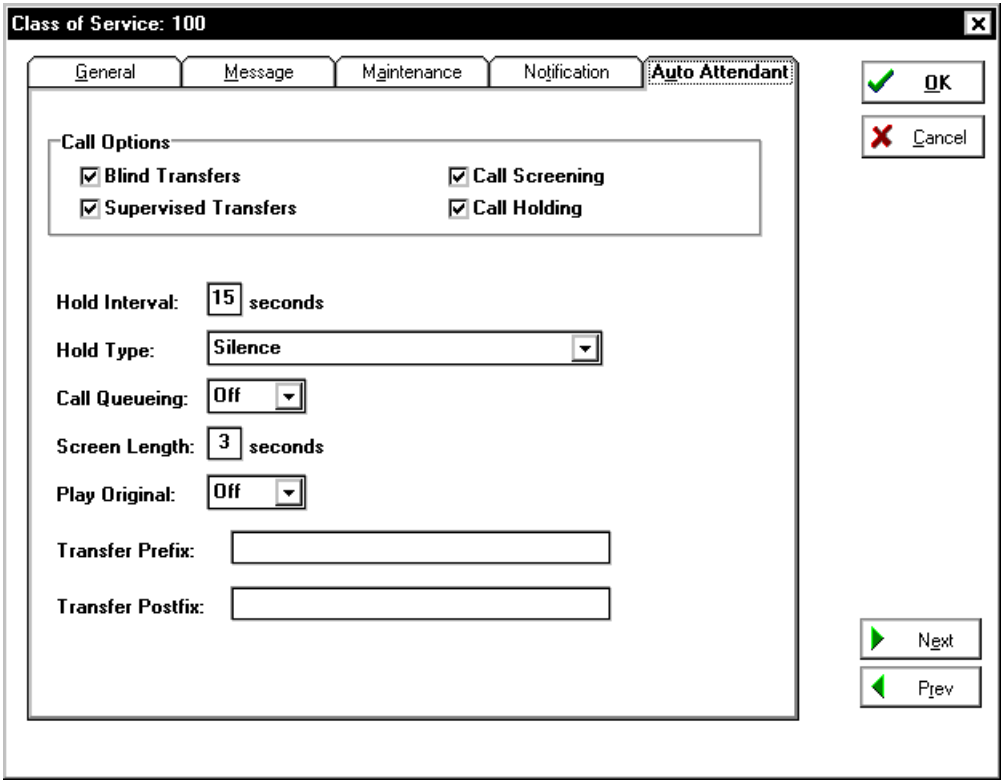


Figure 5-22. Class of Service Auto Attendant Tab

Call Options

Customers can change their extension settings from their mailbox.

Blind Transfer

Allows unsupervised call transfers. the Digital Voice Processing System simply forwards the call to the requested extension. This option is commonly used with hunt groups or when the phone is always answered.

Supervised Transfer

The Digital Voice Processing System monitors the transfer to determine whether the called extension is busy or is not being answered.

The customer can significantly alter the voicemail system functioning.

If Supervised Transfer is selected, check one or both of the following:

Call Screening

When a caller dials an extension, Call Screening prompts them for a name. This information is given to the called party before the call is actually transferred. The called party can accept or reject the call.

Call Holding

The caller can hold if the called party is busy. The caller hears:

I'm sorry, [extension's name/signature] is busy. If you would like to hold, press [1]. To try another extension or leave a message for this extension, press [2].

Hold Interval

Determines how long the Digital Voice Processing System waits before retrying a busy extension (related to Call Holding). For example, if the Digital Voice Processing System attempts to ring a busy extension, and the hold interval is set to 10 seconds, it retries the extension every 10 seconds until a connection is made or until the retry limit is reached. Time is measured in seconds, with a maximum interval of 999 seconds.

Hold Type

This setting (related to Call Holding) determines what a caller hears if an extension is busy and they elect to hold.

Silence

Silence keeps the call connected but the caller hears nothing while on hold.

Dial Hold Sequence

The Digital Voice Processing System executes a flash-hook when the caller is placed on hold (if provided by the phone system, the flash-hook activates background music).

Play Hold Files

The caller hears recorded messages prepared for the Digital Voice Processing System. Hold files are recorded using the Digital Voice Processing System's telephone based administration and up to nine can be recorded. Record the first prompt file by selecting system prompt 014. The second prompt is 015. All nine files are accessed using 014 through 022. Refer to *Table 4-1. Editing System Prompts* for additional information.

Call Queueing

Places multiple calls on hold for a single extension. The Digital Voice Processing System holds the calls in a queue until they are answered which are answered in the order received.

Call Holding must be enabled for this feature to operate.

Screen Length

Determines the time in which a caller must respond with a name when prompted through Call Screening. Time is measured in seconds with a maximum interval of 999 seconds. Default is 3 seconds.

Play Original

When a message is left in a mailbox of a forwarded extension, the originally dialed extension is identified at the start of the message. The identifier of the originally dialed extension is omitted when this option is not selected.

Transfer Strings - Transfer Prefix, Transfer Postfix

Transfer strings are available and can be modified in the Digital Voice Processing System, however, they have no affect on the system. This feature is handled by digital communications with the phone system.

Menus

The Menus screen displays names and descriptions. Multi-level menus direct users and callers to information, assist them in performing tasks, and guide them with using the system. Insert a menu by clicking the Insert button. Edit a menu by double-clicking one listed. Delete a menu by highlighting the menu and pressing Delete.

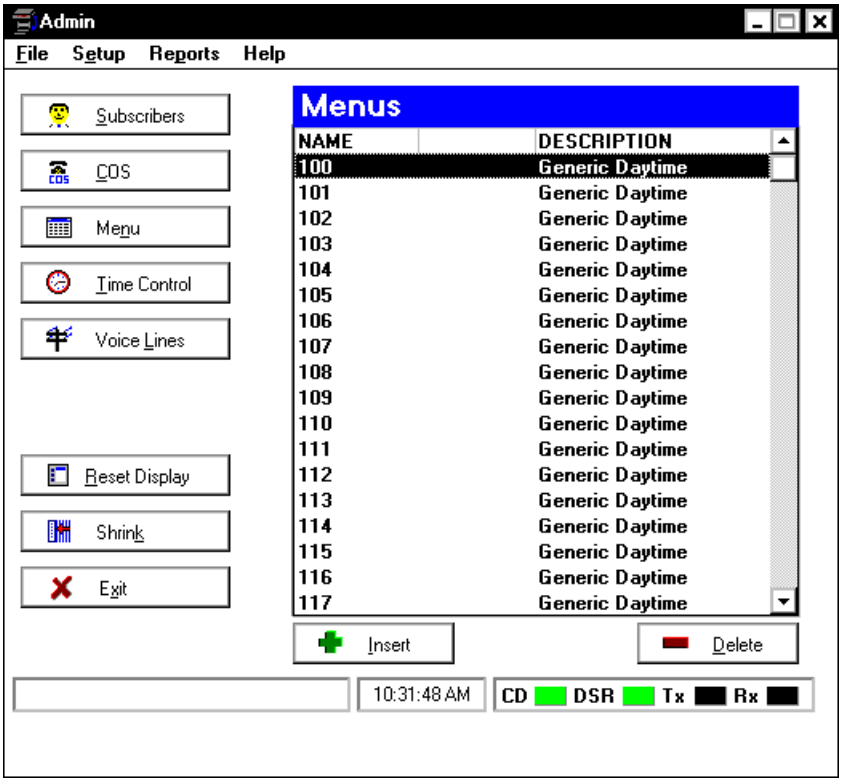


Figure 5-23. Menus Screen

A menu is a list of actions executed through touch-tone keys. For example, *For sales, press [4]. For support, press [5]. For administration, press [6]...* A menu performs up to 13 actions, with each action corresponding to a key on a standard telephone keypad (including # and ✳), plus one time-out action.

An action is an instruction selected from the Menu Action List and instructs the Digital Voice Processing System how to respond when a particular key is pressed. An action performs another module (transfers a call to an extension through the auto attendant) or performs a special feature (plays a prerecorded message).

Insert Menu

Click Insert and the following screen displays:

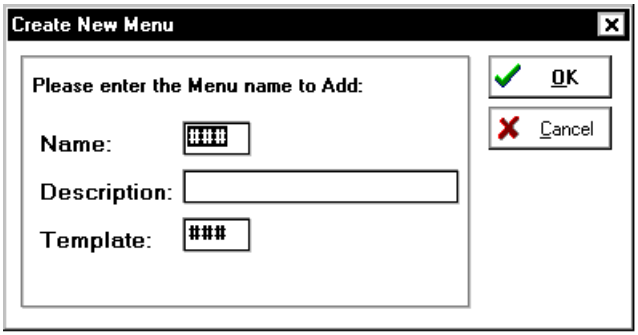


Figure 5-24. Create New Menu Screen

When creating a new menu, complete the following fields:

Name

A 3-digit numeric name that references the new menu. The Digital Voice Processing System includes menus in the 1XX range. Menus you create should be between 200-998.

Description

Text that describes the menu being created.

Template

A 3-digit numeric code of another menu to use as a template when creating this menu. For example, if menu 200 exists and you want to create menu 201 that is similar to 200, enter 200 as the template menu. The template field may be left blank.

Delete Menu

Before deleting a menu, a confirmation screen displays as illustrated below.

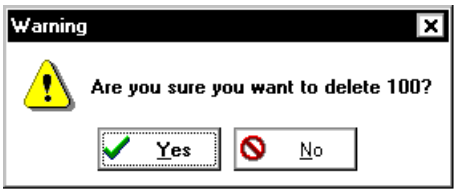


Figure 5-25. Delete Menu Confirmation Screen

Edit Menu

From the menu screen, double-click a menu to select it, then select the options for that menu. This screen permits editing of an existing menu.

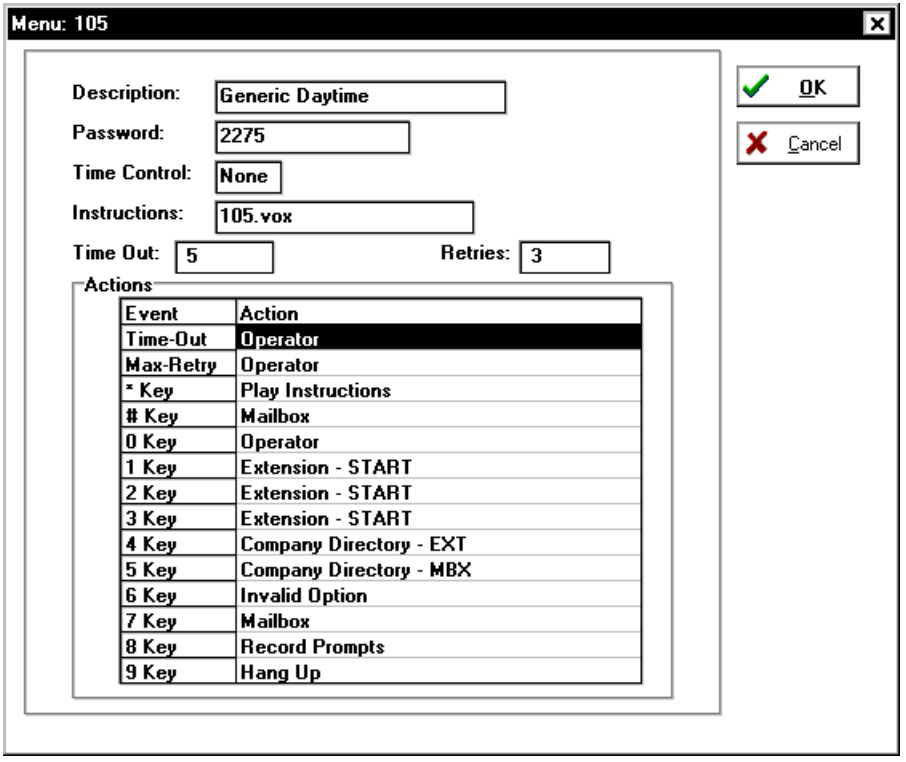


Figure 5-26. Edit Menu Screen

Description

Enter a brief description of the function that identifies the purpose of this menu.

Password

Specify the password to protect the on-line recording action. This password is required when a caller accesses the action Record Prompts.

Time Control

Calls are often handled differently in the evening, during the weekend, or on holidays than during regular business hours. The time control function defines a set of alternative actions that the Digital Voice Processing System performs for a time setting. Create time controls by selecting Time Control from the Setup menu. Set Time Controls to NONE if time controls are not desired.

Use this option only with assistance from Technical Support.

Instructions

Select the instructions prompt containing the information the caller uses to determine which keys to press. Enter the filename with the VOX extension. The menu number should match the instruction filename. A typical instruction prompt would be: *Press [4] for sales, press [5] for support...* Note that most menus have instruction prompt files. However, these prompt files are dependent on the application design. Hidden menu options not described in the prompt are also available.

The instruction prompt must be a number to enable use of online administration.

Time Out

The amount of time the time-out action is in effect if the caller presses no key.

Retries

The number of times a caller can initiate an invalid option. If the caller exceeds this number, the Max Retries key action is taken.

Key Actions

The bottom part of the Edit Menu screen addresses Key Actions. Key actions determine the response invoked when a particular key is pressed. Each dial-pad key has an accompanying key action field. In addition, there is a field labeled Time-Out. The Time-Out field indicates what happens when the caller does not press any keys before the Time-Out period elapses. Clicking any Key Action displays the X Key Action dialog box for editing the key.

Clicking one of the actions in the Action section displays a description of that action. For example, if the operator option is selected, a notification of transferring the caller to the operator displays.

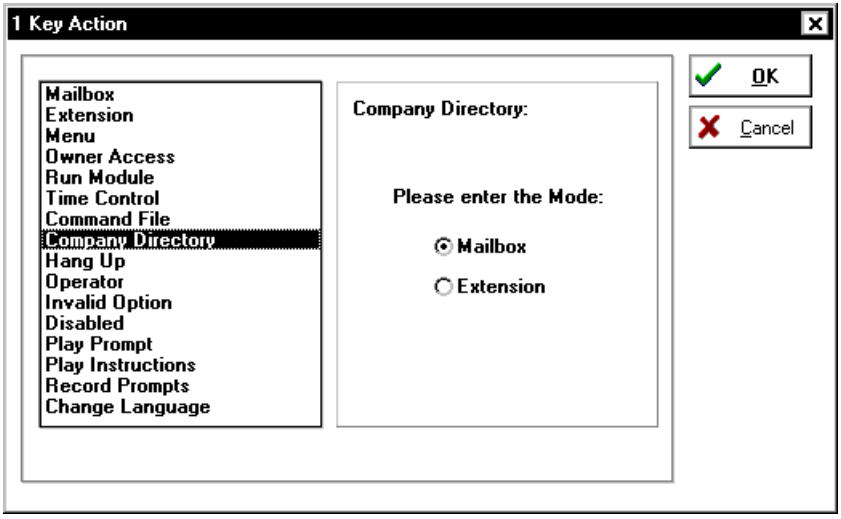


Figure 5-27. Key Actions

Define a key by selecting an option as follows:

Mailbox

Sends the caller to a specific mailbox. If no mailbox is entered, the Digital Voice Processing System prompts the caller for a mailbox number.

Prompt for Mailbox

Prompts for the mailbox number. For example, if key action 1 is a prompt for a mailbox, when the caller presses [1], they hear *Please enter the mailbox number of the person you are trying to reach.*

Key is First Digit of Mailbox

The first digit of the mailbox being accessed. For example, if key 2 is set to Key is first digit, when a caller presses [2], they do not hear a prompt and the system waits for more digits.

Goto Mailbox

Goes to a specific mailbox. For example, if key 3 is set to mailbox 40, when the caller presses [3], they directly access mailbox 40.

Extension

Sends the caller to a specific extension. If no extension is entered, the Digital Voice Processing System prompts the caller for an extension number.

Prompt for Extension

Prompts for the extension number. For example, if key action 1 is a prompt for an extension, when the caller presses 1, they hear *Please enter the number of the person you are trying to reach*.

Key is First Digit of Extension

The first digit of the extension being accessed. For example, if key 2 is set to Key is first digit, when a caller presses [2], they do not hear a prompt and the system waits for more digits.

Goto Extension

Goes to a specific extension. For example, if key 3 is set to go to extension 40, when the caller presses [3], they directly access extension 40.

Menu

Executes the selected menu.

Owner Access

Gives access to mailbox owner features. Can be used with in-band integration or to provide access through a hidden key on a menu.

Run Module

Runs other modules that the Digital Voice Processing System supports.

Do not perform this function without assistance from Technical Support.

Time Control

Enter the time control to run. Takes actions based on time, day, and day of the week values, as specified in a time control setting.

Command File

Runs the command file script. See Appendix C for more information.

Do not perform this function without assistance from Technical Support.

Company Directory

Provides a company directory listing for mailboxes or extensions.

Hang Up

Plays *thank-you for calling* prior to disconnecting the caller. For example, a menu might include this option at the end of a list: *press [4] for sales, [5] for support, [#] to return to the previous menu, and [9] to hang up*.

Operator

Transfers the caller to an operator using the blind transfer to [0]. Refer to the information later in this section for configuring the operator.

Invalid Option

Plays the message *Invalid option* and repeats the instructions.

Disabled

Makes pressing a key have no effect, as if the key was never pressed.

Play Prompt

Plays the indicated voice prompt file.

Play Instructions

Replays the instructions prompt, such as: *To hear this menu again press...*

Record Prompts

Lets a caller re-record menu prompts. After pressing the key associated with this action, the caller is prompted for the menu password. The Instructions or any *Play Prompt* file attached to a key, is then recorded or edited.

Change Language

Changes the prompt files to those recorded in the selected language.

Only the purchased language is available.

Time Controls

Time controls route calls, send callers to voicemail, and play menus, etc. (based on time and day settings). Up to 10 time periods can be defined within a time control setting, making a time control as simple or as complex as desired. Time Controls can be chained together to allow more than ten day/time options, however, chaining Time Controls can cause delays. Time Controls are searched by item, starting with the first item.

The Time Control menu displays time control names and descriptions. To access the Time Controls function, click Time Control on the main menu.

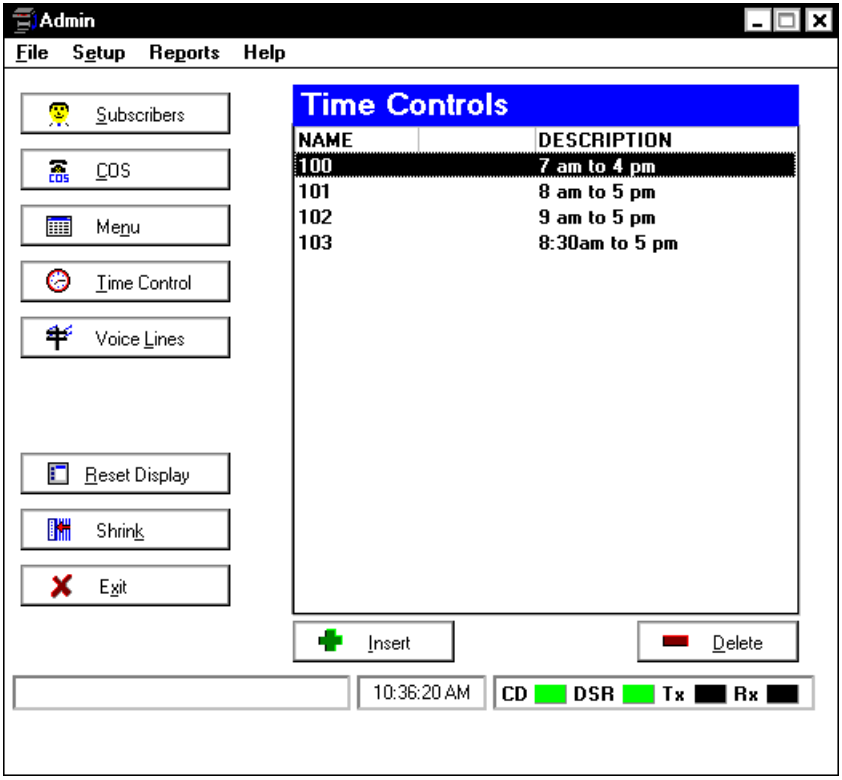


Figure 5-28. Time Controls

Edit an existing time control by clicking on it or click Insert to add a new time control. To delete a time control, highlight it and click Delete.

Insert Time Control

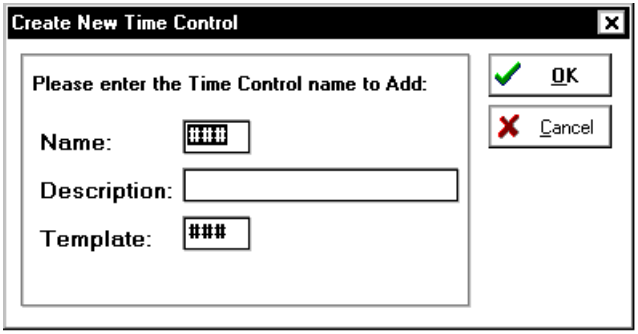


Figure 5-29. Create New Time Control

When creating a new time control, complete the following fields:

Name

A 3-digit numeric name that references the new time control. The Digital Voice Processing System includes time controls in the 1XX range. Create time controls between 200-999.

Description

Text that describes the time control being created.

Template

The 3-digit numeric code of another time control to use as a template. For example, if time control 200 exists and time control 201 is similar to 200, enter 200 as the template time control. The template field may be left blank.

Delete Time Control

A confirmation displays before deleting a time control as shown below.

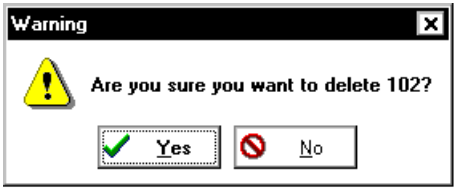


Figure 5-30. Delete Time Control Confirmation

Edit Time Control

From the Time Control menu, click a time controls to display the following screen:

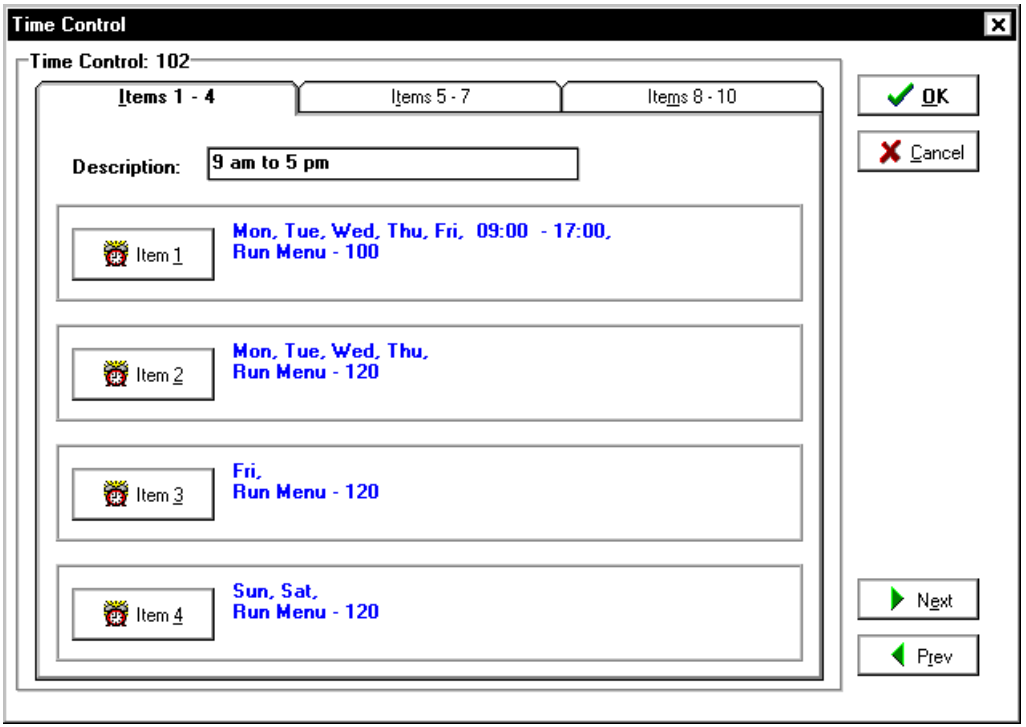


Figure 5-31. Edit a Time Control

Description

Enter a description for the time control that describes its purpose.

Items 1-10

Click any item button to define a time control function. Make sure the last time control entry includes all dates, times, days, and an action. Otherwise, the system may terminate the call unexpectedly.

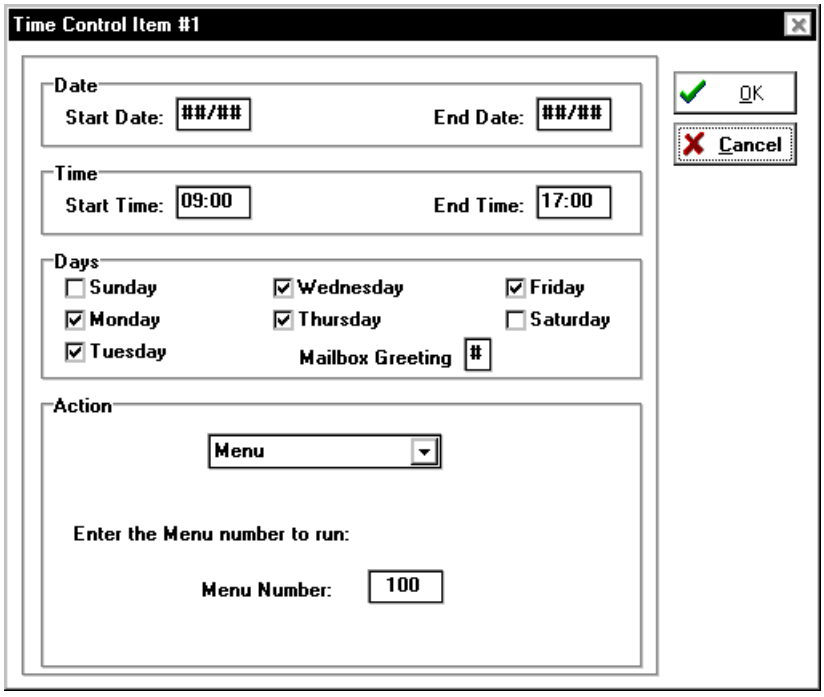


Figure 5-32. Define Time Control Function

Use the tenth field to chain time controls together.

Date

Enter a start and end date, using MM/DD date format (01/01 through 12/31), to indicate specific starting and ending dates to which the time control applies. Note that when specifying date and time, leaving either field blank means the option to applies to ALL dates.

Time

Enter a start and end time, using twenty-four hour format (00:00 through 23:59), to indicate the specific times during the day that the time control is active. Leaving these fields blank means the option applies to all times.

Days

Click the checkbox for each day to which the time control item applies.

Make certain all times, days, and dates are specified to achieve desirable results.

Mailbox Greeting

Enter a number from 1-9 to distinguish different time-related events within a time control. The mailbox greeting setting controls which mailbox greeting plays when a mailbox is accessed and a time control is defined. Refer to the previous discussion of mailbox settings for more information.

Action

Select the action to perform during the indicated dates, days of the week, and hours during the day.

Mailbox

Sends the caller to a specific mailbox. If no mailbox is entered, the Digital Voice Processing System prompts the caller for a mailbox number.

Prompt for Mailbox

Prompts for the mailbox number.

Key is First Digit of Mailbox

The first digit of the mailbox being accessed.

Goto Mailbox

Accesses a specific mailbox.

Extension

Sends the caller to a specific extension. If no extension is entered, the Digital Voice Processing System prompts the caller for an extension number.

Prompt for Extension

Prompts for the extension number.

Key is First Digit of Extension

The first digit of the extension being accessed.

Goto Extension

Accesses a specific extension.

Menu

Executes the selected menu.

Run Module

Runs other modules that the Digital Voice Processing System supports.

Do not perform this function without assistance from Technical Support.

Time Control

Executes actions defined in a time control setting.

Command File

Executes the command file script.

Company Directory

Provides a company directory listing for mailboxes or extensions.

Voice Lines

Displays voice line actions. Voice Line actions define how the Digital Voice Processing System answers incoming calls.

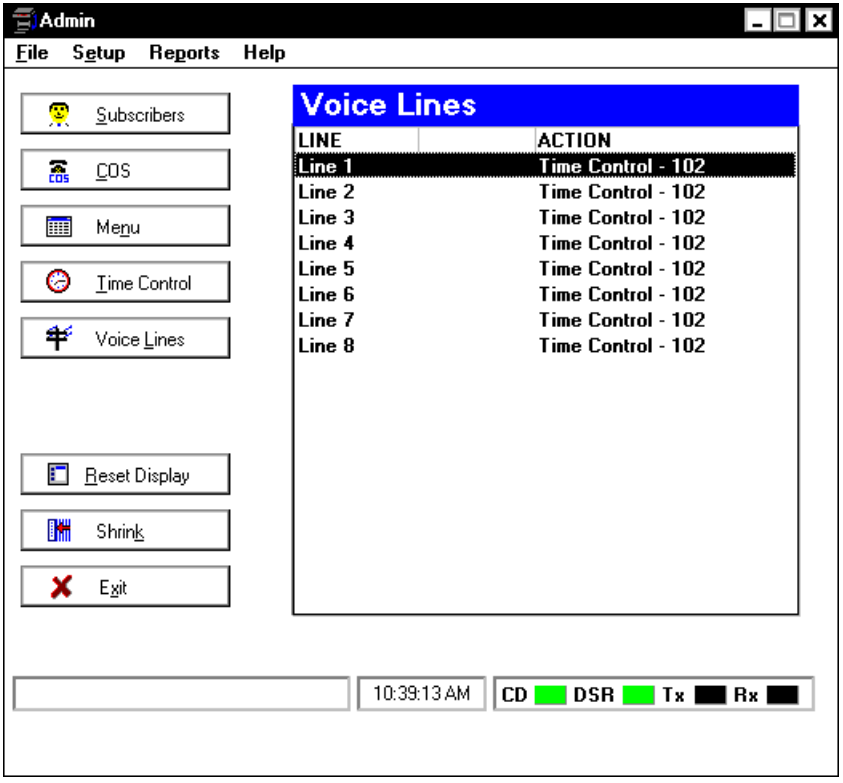


Figure 5-33. Voice Lines

Double-clicking a voice line displays the Edit Line Settings dialog box for specifying actions for the selected line.

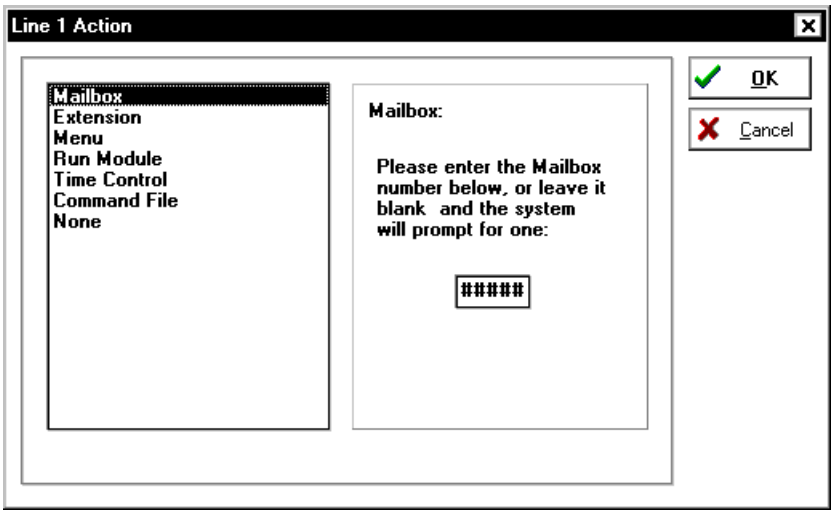


Figure 5-34. Edit Line Settings

Mailbox

Sends the caller to a specific mailbox. If no mailbox is entered, the Digital Voice Processing System prompts the caller for a mailbox number.

Extension

Sends the caller to a specific extension. If no extension is entered, the Digital Voice Processing System prompts the caller for an extension number.

Menu

Executes the selected menu.

Run Module

Enter a module name to execute and any parameters for the module.

Do not perform this function without assistance from Technical Support.

Time Control

Enter a time control to execute.

Command File

Enter a command file to execute. Refer to *Appendix B* for more information.

Reset Display

The Reset button clears the main window.

Shrink

The Shrink button returns the laptop/PC administration programming window to its original size.

Exit

The Exit button exits laptop/PC administration.

Pull-Down Menus

Menus at the top of the main screen provide access to the functions described below.

File Menu

Generally, the only option available on the File menu is Exit which exits the Digital Voice Processing System administration program. However, if there is a modem connection, available options include Dial, Hangup, and Exit. See the Setup Modem discussion earlier in this section for more information on these functions.

Setup Menu

The Setup menu consists of these options:

- Subscriber
- Class of Service
- Menu
- Time Control
- Lines
- Phone System
- Port Setup
- Modem
- Advanced

The first five options provide the same functions as the corresponding buttons in the main menu. The other options are described below.

Setup Phone System

Lists available configuration files and their corresponding phone systems. The following message displays if a phone system has not been selected. Refer to *Section 2* for information on selecting a phone system.

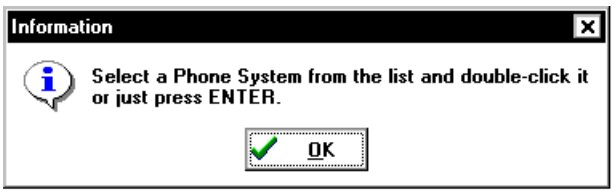


Figure 5-35. Select Phone System Message

The screen below displays after clicking OK on the Select Phone System message or if a phone system was already selected.

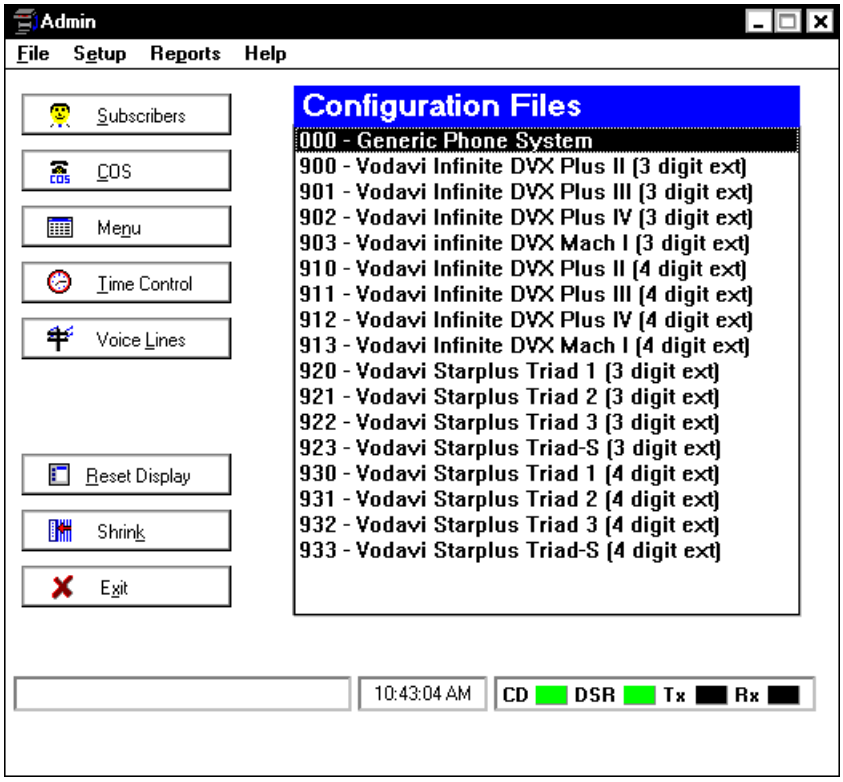

Admin
File Setup Reports Help
Subscribers
COS
Menu
Time Control
Voice Lines
Reset Display
Shrink
Exit
Configuration Files
000 - Generic Phone System
900 - Vodavi Infinite DVX Plus II (3 digit ext)
901 - Vodavi Infinite DVX Plus III (3 digit ext)
902 - Vodavi Infinite DVX Plus IV (3 digit ext)
903 - Vodavi infinite DVX Mach I (3 digit ext)
910 - Vodavi Infinite DVX Plus II (4 digit ext)
911 - Vodavi Infinite DVX Plus III (4 digit ext)
912 - Vodavi Infinite DVX Plus IV (4 digit ext)
913 - Vodavi Infinite DVX Mach I (4 digit ext)
920 - Vodavi Starplus Triad 1 (3 digit ext)
921 - Vodavi Starplus Triad 2 (3 digit ext)
922 - Vodavi Starplus Triad 3 (3 digit ext)
923 - Vodavi Starplus Triad-S (3 digit ext)
930 - Vodavi Starplus Triad 1 (4 digit ext)
931 - Vodavi Starplus Triad 2 (4 digit ext)
932 - Vodavi Starplus Triad 3 (4 digit ext)
933 - Vodavi Starplus Triad-S (4 digit ext)
10:43:04 AM
CD DSR Tx Rx

Figure 5-36. Configuration Files

Double-clicking a configuration file displays the following screen that lists the new and current Digital Voice Processing System configuration:

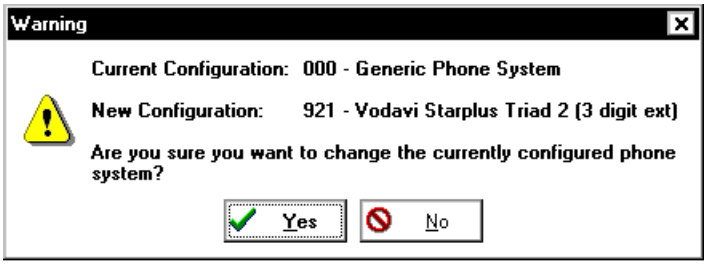

Warning
Current Configuration: 000 - Generic Phone System
New Configuration: 921 - Vodavi Starplus Triad 2 (3 digit ext)
Are you sure you want to change the currently configured phone system?
Yes
No

Figure 5-37. Configuration Warning Screen

After pressing Yes, the Digital Voice Processing System reboots.

Port Setup

To configure the Digital Voice Processing System via laptop/PC administration, select Setup: Port Setup from the main window.

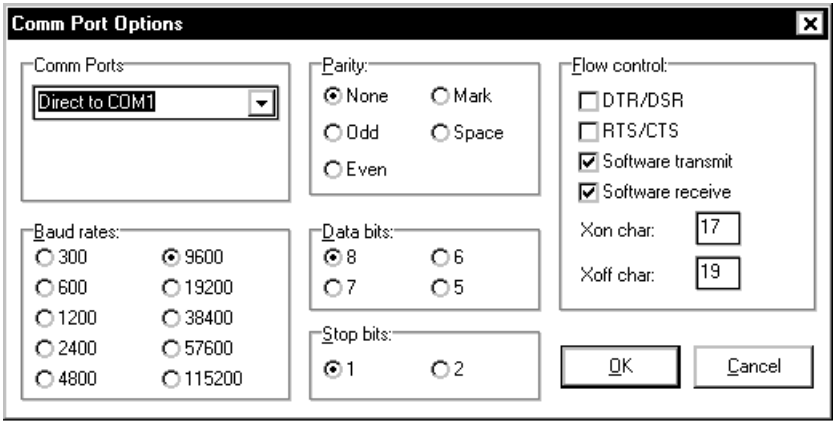


Figure 5-38. Comm Port Options

The default options are shown. It is recommended that none of these options other than the main ComPorts be changed. Set this option to the laptop/PC ComPort.

Modem Setup

The following options are available:

- Quick Configure
- Setup
- Phone Book

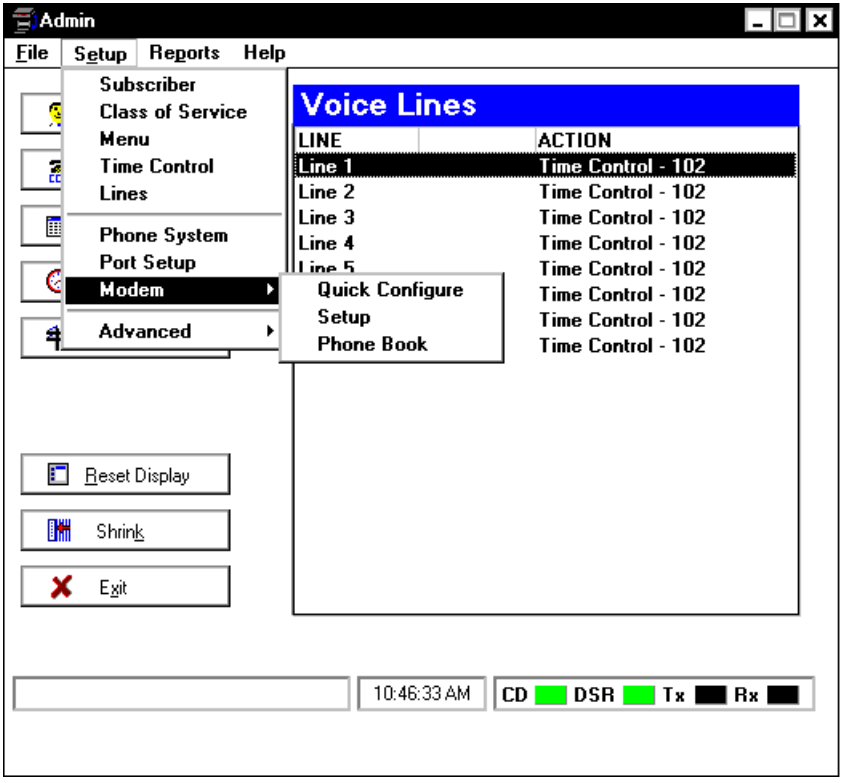


Figure 5-39. Modem Setup Menu

Quick Configure

The Modem Quick Configure provides a list of other available modems.

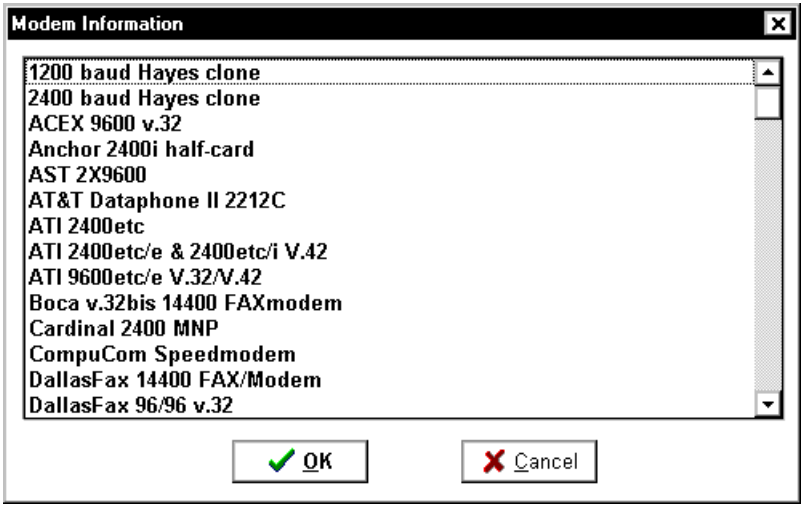


Figure 5-40. Modem Quick Configure

Modem Setup

If the desired modem is not listed, select Modem Setup from which the administration program can be used to configure the modem.

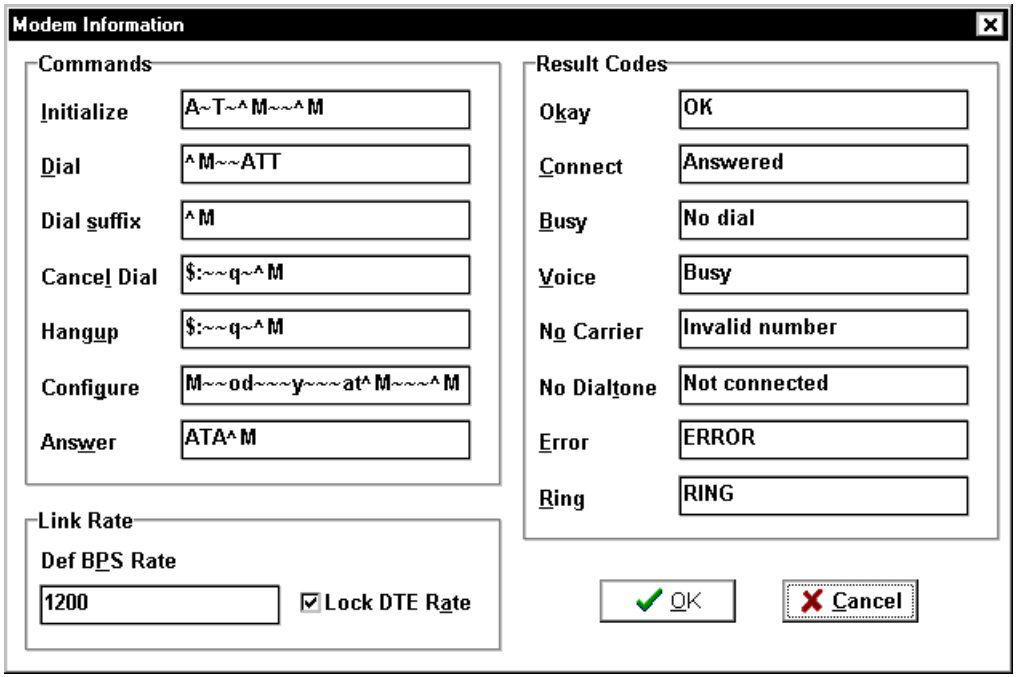


Figure 5-41. Modem Information

Do not change these options unless you are familiar with modems. Contact the modem provider if assistance is needed.

Commands

Command strings that are sent to the modem during different stages of the communication process.

Initialize

Initializes the modem.

Dial

The dialing sequence.

Dial Suffix

Command that follows the dialing sequence. This is necessary because some modems require additional command strings after the dial command. It is recommended to leave this set to ^M, which is the default.

Cancel Dial

Cancels the dial.

Hangup

Hangs up the modem and disconnects the call.

Configure

Determines the configuration string for your modem. Refer to the manual supplied with the modem to determine the necessary configuration string.

Answer

Forces the modem to go off hook and answer the line.

Result Codes

Codes that the administration program expects to receive from the modem.

Okay

Normal response for a properly executed command.

Connect

Code returned when the modem connects to a remote modem.

Busy

Remote modem is busy.

Voice

Someone answered the phone line and attempted to speak into it.

No Carrier

An interruption occurred (intentionally or unintentionally) with the remote system connection.

No Dialtone

The modem went off hook but did not receive a dial tone.

Error

The modem detected an error.

Ring

An incoming call was detected by the modem. At the bottom of the Modem Setup screen is Link Rate information.

Link Rate

Def BPS Rate

Default communication rate between the two systems.

Lock DTE Rate

Forces the baud rate to remain the same. It is recommended that the baud rate be left at 9600 (default).

Phonebook

Use the Modem Phonebook screen to edit phonebook entries. The advantage of the Phonebook is that when administering one or more voicemail systems, phone numbers are conveniently stored in the phonebook.

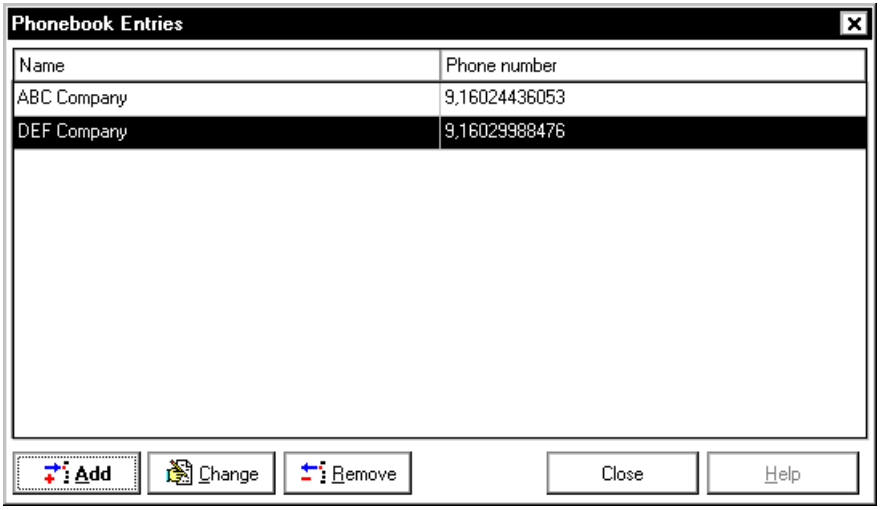


Figure 5-42. Modem Phonebook

Adding a modem phonebook entry displays the following screen.

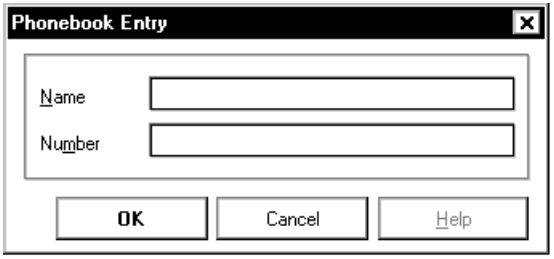


Figure 5-43. Phonebook Entry

Name

An associated name for this number.

Number

Telephone number to dial at the site. Changing a modem phonebook entry displays the following screen for editing the phonebook entry:

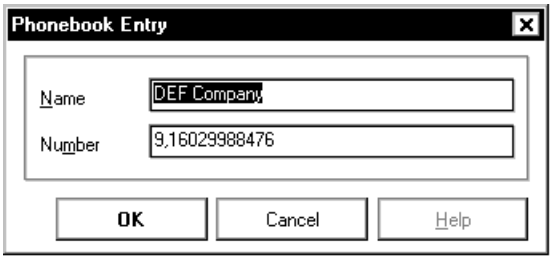


Figure 5-44. Telephone Number

Removing a modem phonebook entry displays a confirmation screen.

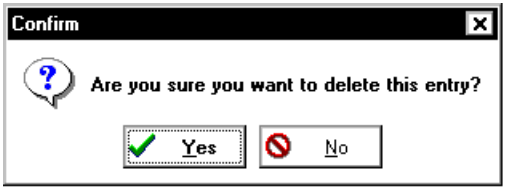


Figure 5-45. Delete Phonebook Entry Warning

Advanced Setup

Provides the following alternatives:

- Edit Registry
- System Settings
- Set Unit Date and Time
- Phone System Config Message On
- Shutdown

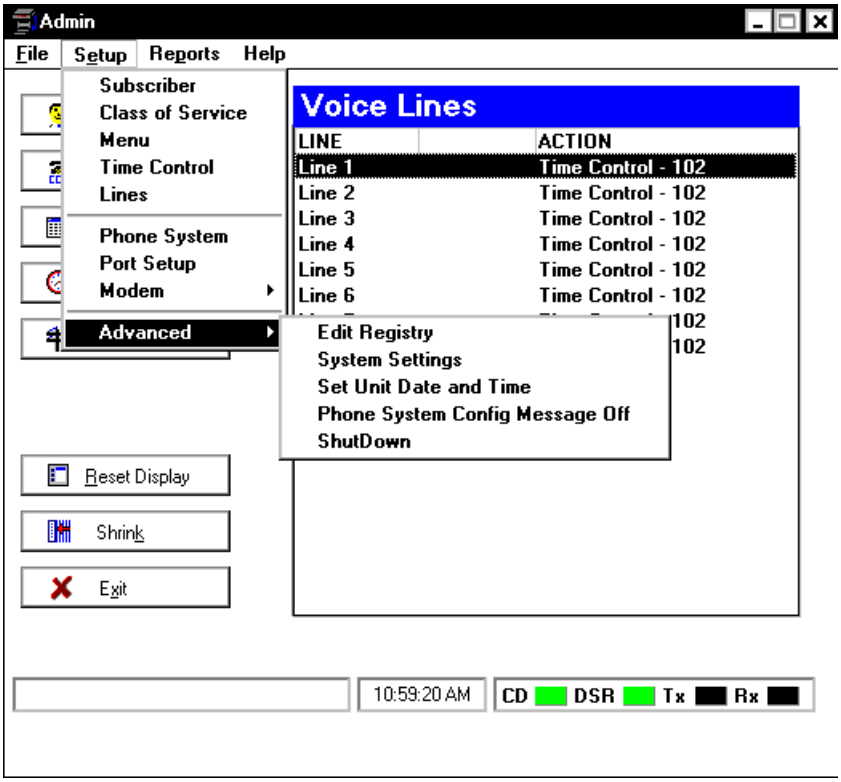


Figure 5-46. Modem Setup

Edit Registry

The registry contains system variables that control the Digital Voice Processing System. Normally, these values need not change. Contact Vodavi Communications Systems' Technical Support department for assistance if a change is required.

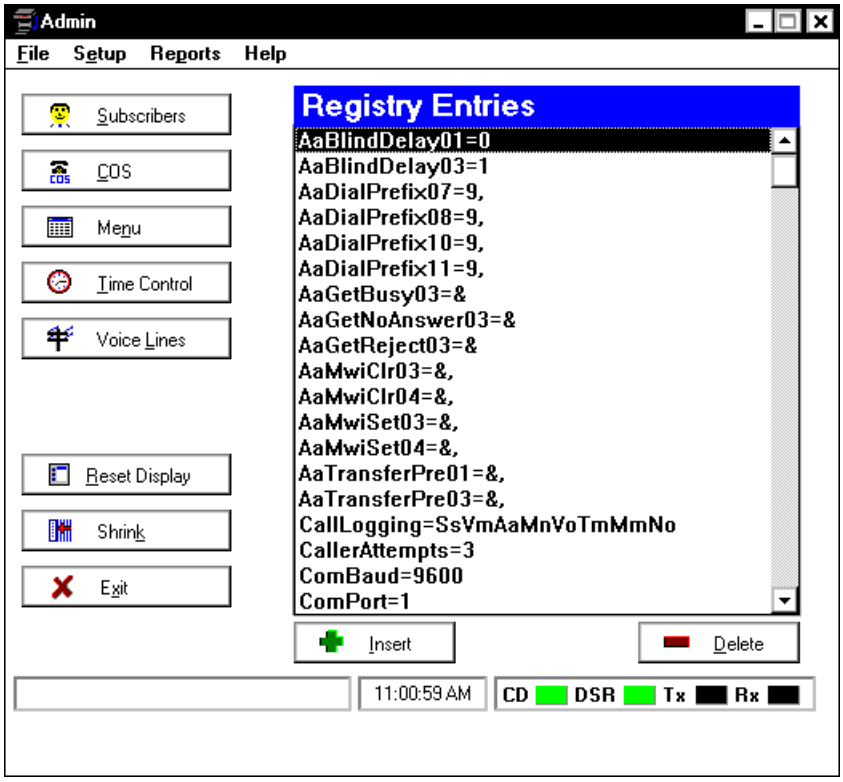


Figure 5-47. Registry Entries

Improper changes to the Registry items can cause erratic system behavior.

Change the names and values of registry entries by double-clicking an entry on the Edit Registry screen.

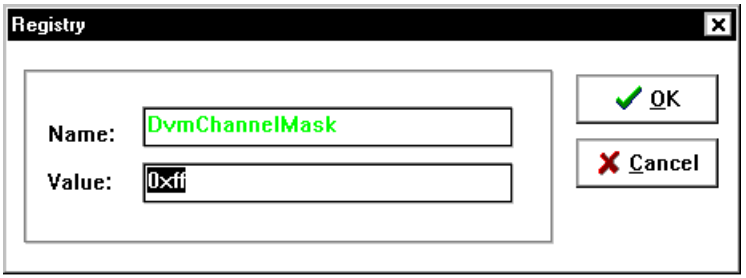


Figure 5-48. Registry Values

System Settings

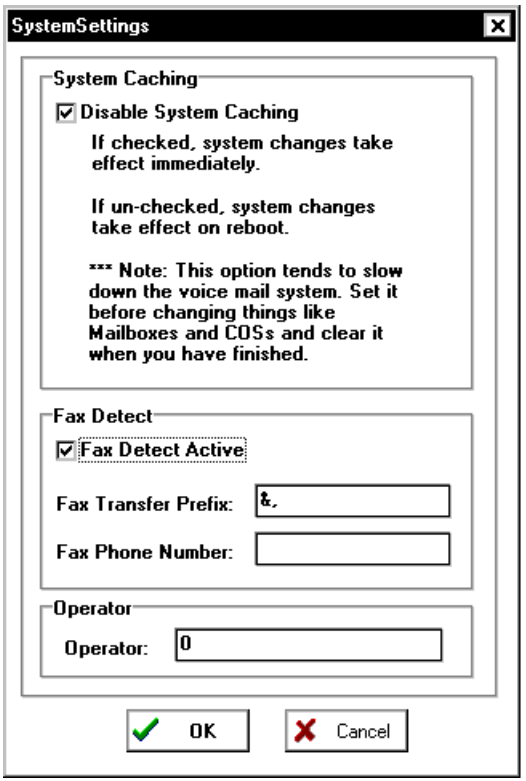

SystemSettings
System Caching
Disable System Caching
If checked, system changes take effect immediately.
If un-checked, system changes take effect on reboot.
*** Note: This option tends to slow down the voice mail system. Set it before changing things like Mailboxes and COSs and clear it when you have finished.
Fax Detect
Fax Detect Active
Fax Transfer Prefix:
Fax Phone Number:
Operator
Operator:
0
OK
Cancel

Figure 5-49. System Settings

System Caching

If System Updates Take Effect Immediately is selected, any change made to a menu, mailbox, COS, etc., is immediately effective. The disadvantage is that this option slows the system. Unchecking this option requires a system reboot for changes to take effect.

Turn caching off (by checking the box) when initially configuring the system; turn caching on (by unchecking the box) when programming changes are complete.

Fax Detect

Fax Detect strings are available and can be modified in the Digital Voice Processing System, however, they have no affect on the system. This feature is handled by the digital communications with the phone system.

Operator

Global default operator for all operator functions. This is the dial sequence sent to the phone system to contact the Operator [0]. In most situations, this is the sequence dialed when the caller dials [0].

Set Unit Date and Time

Sets the Digital Voice Processing system date and time, then the system restarts. All callers are disconnected. The System Reboot Warning message displays followed by the Set Unit Date and Time screen after clicking OK.

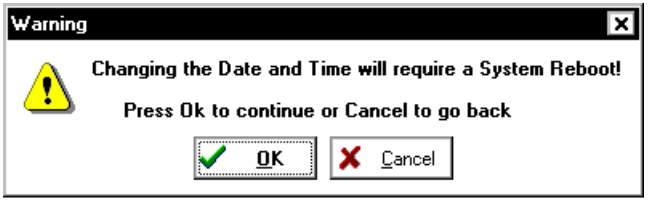


Figure 5-50. System Reboot Warning Message

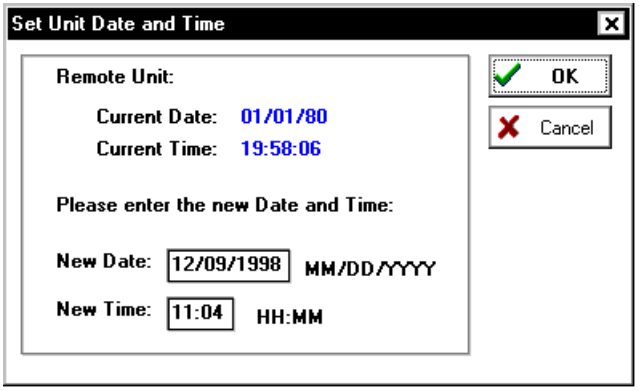


Figure 5-51. Set Unit Date and Time

Phone System Config Message On

If the Digital Voice Processing System is not configured to a phone system, or if it is configured to a default phone system, the Default Phone System Configuration screen displays as shown below. Deselecting the *Display this message at start-up each time the program is run* option prevents the Default Phone System Configuration screen from displaying in the future. Selecting Setup, Advanced, Phone System Config Message On from the Setup pull-down menu displays this screen again.

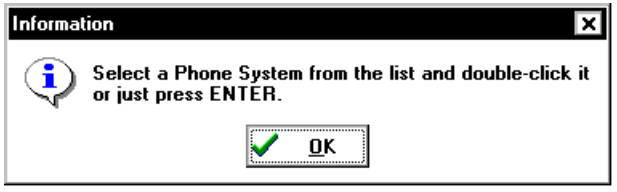


Figure 5-52. Default Phone System Configuration

Shutdown Menu

The Shutdown menu provides various options for shutting down the Digital Voice Processing System.

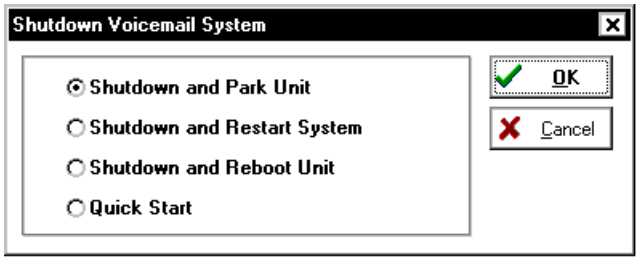


Figure 5-53. Shutdown Voicemail System

Shutdown and Park Unit

Shuts down the voicemail unit and does not restart it again. The power supply must be removed to restart.

Shutdown and Restart System

Shuts down the voicemail unit and executes a verification of configuration information (without rebooting the system).

Shutdown and Reboot Unit

Shuts down the voicemail unit, then reboots the system.

Quick Start

Initiates a quick shutdown and startup without internal configuration verification.

Reports Menu

Displays system logs. Select an option from the main administration menu (Subscribers, COS, Menus, etc.) to access the Reports menu.

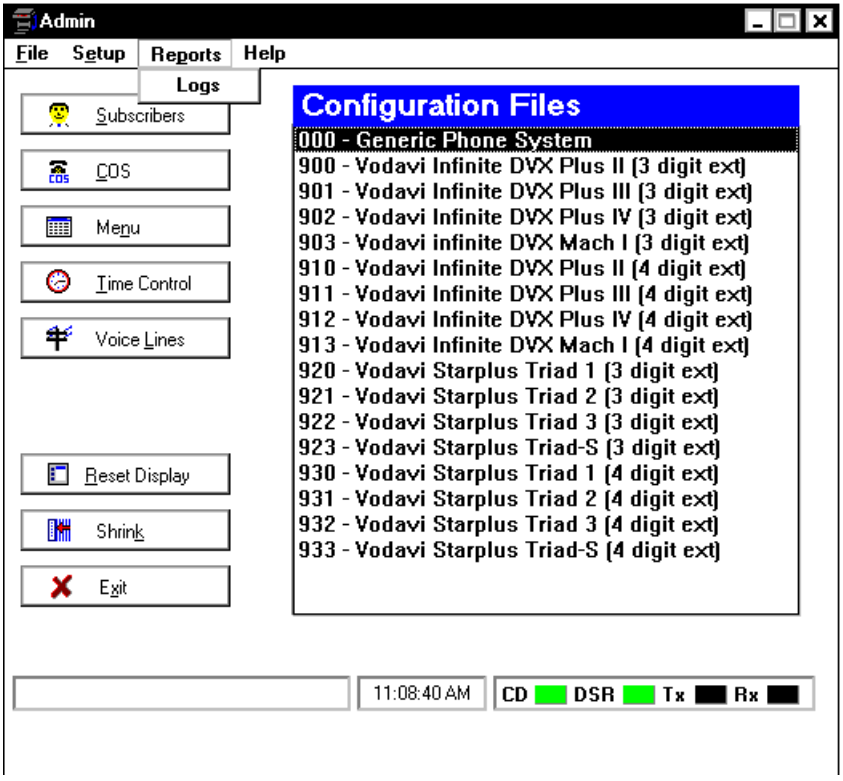

Admin
File
Setup
Reports
Help
Logs
Subscribers
COS
Menu
Time Control
Voice Lines
Reset Display
Shrink
Exit
Configuration Files
000 - Generic Phone System
900 - Vodavi Infinite DVX Plus II (3 digit ext)
901 - Vodavi Infinite DVX Plus III (3 digit ext)
902 - Vodavi Infinite DVX Plus IV (3 digit ext)
903 - Vodavi infinite DVX Mach I (3 digit ext)
910 - Vodavi Infinite DVX Plus II (4 digit ext)
911 - Vodavi Infinite DVX Plus III (4 digit ext)
912 - Vodavi Infinite DVX Plus IV (4 digit ext)
913 - Vodavi Infinite DVX Mach I (4 digit ext)
920 - Vodavi Starplus Triad 1 (3 digit ext)
921 - Vodavi Starplus Triad 2 (3 digit ext)
922 - Vodavi Starplus Triad 3 (3 digit ext)
923 - Vodavi Starplus Triad-S (3 digit ext)
930 - Vodavi Starplus Triad 1 (4 digit ext)
931 - Vodavi Starplus Triad 2 (4 digit ext)
932 - Vodavi Starplus Triad 3 (4 digit ext)
933 - Vodavi Starplus Triad-S (4 digit ext)
11:08:40 AM
CD
DSR
Tx
Rx

Figure 5-54. Reports Menu

On the Reports menu, the only available option is Logs. Enter the log date and start and end times for the report.

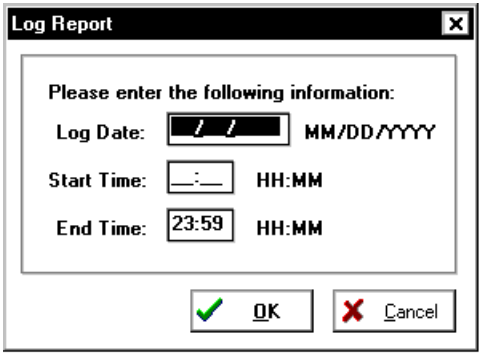


Figure 5-55. Log Report

Help Menu

The Help menu contains two options: About and Current Configuration.

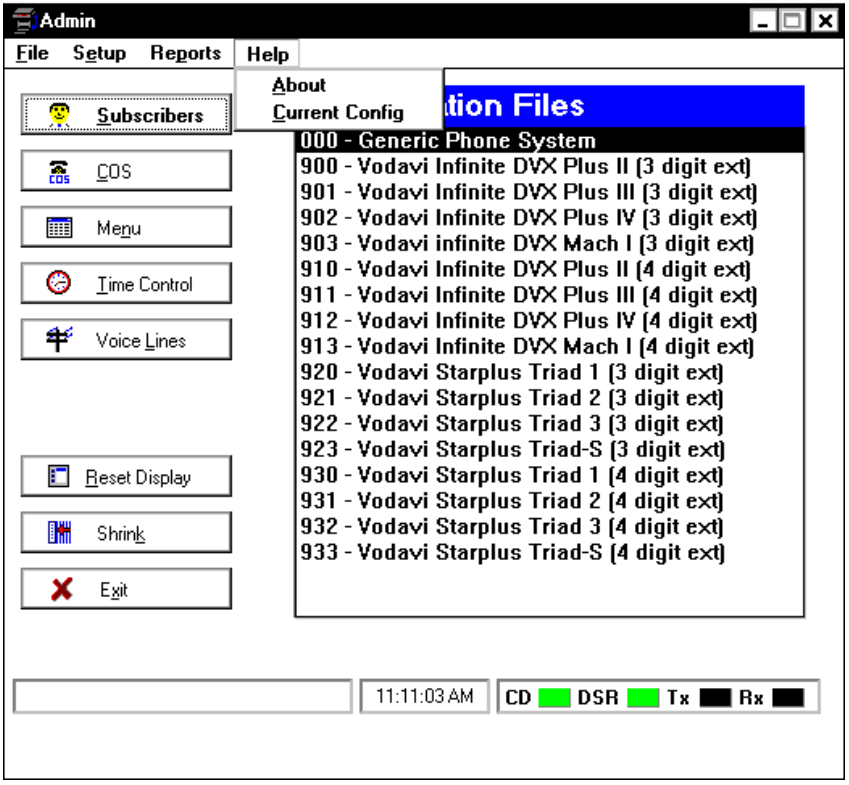

Admin
File
Setup
Reports
Help
About
Current Config
tion Files
Subscribers
COS
Menu
Time Control
Voice Lines
Reset Display
Shrink
Exit
000 - Generic Phone System
900 - Vodavi Infinite DVX Plus II (3 digit ext)
901 - Vodavi Infinite DVX Plus III (3 digit ext)
902 - Vodavi Infinite DVX Plus IV (3 digit ext)
903 - Vodavi infinite DVX Mach I (3 digit ext)
910 - Vodavi Infinite DVX Plus II (4 digit ext)
911 - Vodavi Infinite DVX Plus III (4 digit ext)
912 - Vodavi Infinite DVX Plus IV (4 digit ext)
913 - Vodavi Infinite DVX Mach I (4 digit ext)
920 - Vodavi Starplus Triad 1 (3 digit ext)
921 - Vodavi Starplus Triad 2 (3 digit ext)
922 - Vodavi Starplus Triad 3 (3 digit ext)
923 - Vodavi Starplus Triad-S (3 digit ext)
930 - Vodavi Starplus Triad 1 (4 digit ext)
931 - Vodavi Starplus Triad 2 (4 digit ext)
932 - Vodavi Starplus Triad 3 (4 digit ext)
933 - Vodavi Starplus Triad-S (4 digit ext)
11:11:03 AM
CD
DSR
Tx
Rx

Figure 5-56. Help Menu

Help, About lists the Digital Voice Processing System administration software and voicemail system versions as shown below.

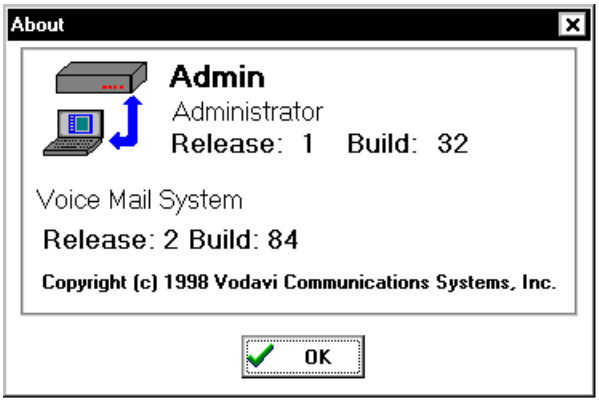


Figure 5-57. Help About

Help, Current Config lists information about the configuration file currently selected as shown below.

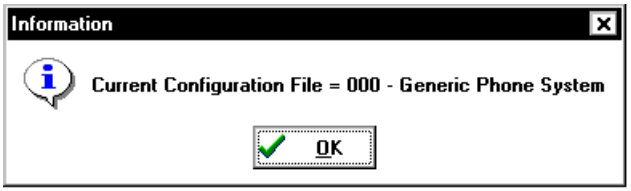


Figure 5-58. Current Configuration

6 Upgrading

Upgrading Ports

Use these instructions when upgrading the number of ports on a voicemail unit. A port upgrade kit must be purchased from Vodavi before proceeding.

Call your sales representative with the serial number of the voice processing unit for the upgrade.

Instructions are separated into two sections: **hardware** and **software**. Use the software section for all upgrades. Use the hardware section only when moving from:

- ❒ 2 to 6 ports
- ❒ 2 to 8 ports
- ❒ 4 to 6 ports
- ❒ 4 to 8 ports

If upgrading from 2 to 4 or 6 to 8 ports, go directly to the Software Installation section which immediately follows the Hardware Installation section.

Hardware Installation

Hardware must be added to the voicemail system when upgrading from:

- ❒ 2 to 6 ports
- ❒ 2 to 8 ports
- ❒ 4 to 6 ports
- ❒ 4 to 8 ports

Tools Required

- ❒ Phillips #1 or 2 screwdriver
- ❒ Nut driver (for ¼ inch hex standoff)
- ❒ Static control wrist strap. For example: Desco #9070 or Ideal Stat Gard #61-038 kit.

Parts included in the hardware kit are shown in the following table:

Item	Part	Quantity
1	8 port replacement digital line card	1

Table 6-1. Hardware Kit Parts

Prepare Unit

1 Shut down and park the voicemail system using the Windows Admin program (Setup, Advanced, Shutdown) or the telephony interface.

2 Disconnect power to the system.

3 Disconnect all phone lines from the voicemail ports.

4 Remove unit from wall by lifting off the mounting screws (if wall mounted).

5 Place unit on sturdy flat surface, preferably on a static dissipating surface such as a properly grounded anti-static mat.

Access Line Card Mounting and Install Card

1 It is highly recommended to use anti-static precautions, such as a static-dissipating wrist strap (see Tools Required above), before opening the upgrade kit and whenever the voicemail unit is open. ***This point cannot be overstressed***. This unit and the hardware upgrade kit contain static-sensitive components. ***These components MUST receive adequate protection from electro-static discharge.***

2 Remove top cover by unscrewing the four screws, two on each of the bottom side edges of the unit. Slide the cover off towards the end with the LED lights.

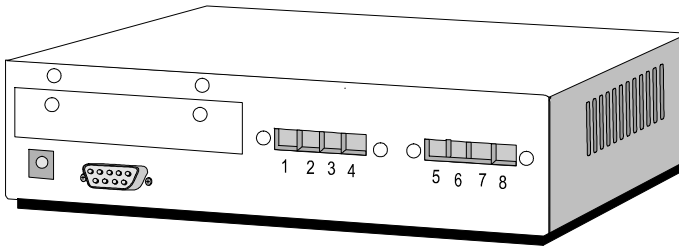


Figure 6-1. Removing the Cover

3 Locate the line card (the RJ-11 connectors for the phone lines).

4 The old 4 port line card and the new 8 port line card are mounted the same. They differ in the number of components *stuffed* onto the line card. During the removal and installation process, note the location of screws, ribbon cable, and the orientation of the ribbon cables.

5 Remove the two ribbon cables and note the orientation for installation to the 8 port card.

6 Remove the 6 screws holding the card to the metal support bracket. Remove the line card and store it in a safe and static-free location.

7 Remove the metal support bracket by removing the two rear screws and the two screws connecting the standoffs.

8 Install the 8 port metal support bracket, using four screws.

9 install the 8 port line card, using six screws.

10 Install the two ribbon cables noting the polarity and location. Do not bend the pins.

Reassemble chassis

1 Slide the cover back into place. It is easiest to slide the cover on a flat surface. Make sure both edges on the base slide into the grooves on the lid. It is difficult to install the screws if the cover is not on properly. Insert the four #8 screws into chassis sides and tighten.

2 Replace the unit to its original mounting or location. Reconnect the RJ-11 ports to lines from the phone system, and power-up the unit.

3 When the system boots, the new ports are unavailable until the software upgrade is performed.

Software Installation

For all upgrades, the software must be loaded to activate the ports. The necessary software is found on a 3.5-inch diskette in the upgrade kit. Follow these instructions to upgrade the software:

Requirements

- ❒ Laptop or PC running Windows 3.1.1 or Windows 3.11 for Workgroups, or higher with floppy disk drive and an available serial port and null modem cable.
- ❒ Admin software loaded on the laptop or PC.
- ❒ Ecom or ProComm software loaded on the laptop/PC (Note: remaining instructions assume that Ecom is the software used to complete the upgrade)
- ❒ Port upgrade diskette

Steps

1 Connect the laptop/PC to the voicemail system.

2 Start the Windows Admin program.

3 Shut down and park the voicemail by selecting Setup, Advanced, Shutdown. Then select Shutdown and Park Unit. Exit the Admin program.

4 Insert the Port Upgrade disk into the diskette drive of the laptop/PC.

5 Start Ecom on the laptop/PC and verify the connection to the voicemail unit.

6 Using Ecom, enter the following DOS commands:

CD\ [Enter]
ZMR [Enter]

7 Use Ecom to send the two files located on the diskette (NEWKEY.KEY and PORTUP.BAT) by pressing the PgUp key. Select Zmodem transfer. Browse for the A: drive and select both files, click Add and OK. Start the upload to the voicemail system. See *Section 7* for more information on file uploading.

8 After a successful upload, execute the following DOS commands:

PORTUP [Enter]
REBOOT [Enter]

9 As the system reboots, the new ports are activated (the LEDs for active ports are all solidly lit when the reboot completes).

If any other LEDs remain lit, refer to Section 7, Technical/Troubleshooting.

Make test calls to all ports to verify that the upgrade completed successfully. If problems exist, refer to *Section 7*, *Technical/Troubleshooting* or contact Technical Support for assistance.

All ports return to their default configuration and must be reconfigured to their original setting prior to placing the Test Calls.

Now that your port count has increased, phone system programming must be modified (Flash 65, button #12) to accommodate the new ports. The last port in the voicemail group must be connected for message waiting indicators, notifications, etc. to work properly.

Generic Upgrading Information

Follow these instructions to upgrade the self-contained digital voicemail unit.

The diskette sent from Vodavi Communications contains a file for upgrading. Any reference in the following section to xxxxxxxx.zip refers to the file on the diskette.

To download the files from the Internet, follow the instructions below:

1. Create a directory on your hard drive called UPDATE.
2. Using any web browser, download the XXXXXXXX.zip file to the UPDATE directory on your hard drive.
3. Connect the voice processing unit to the laptop/PC using the serial cable.
4. Start the ECom program.
5. Click SEND next to +DIE 0.
6. Click the C:\HELLO text in the screen.
7. Create a level 1 backup of your system. Refer to *Section 7* for additional information on system backups.
8. When the C:\HELLO prompt displays, type CD\ and press [Enter].
9. Select FILE -> UPLOAD -> OK.
10. Select ZMODEM and click OK.
11. Double-click the UPDATE directory.
12. Highlight XXXXXXXX.zip and click ADD.
13. Click OK. A screen displays that shows the upload status of the files. When the upload completes, the C:\ prompt displays.
14. At the C:\ prompt, type PKUNZIP -D -O XXXXXXXX.zip and press [Enter].
15. Type REBOOT and press [Enter]. The system reboots and the upgrade is complete.
16. Exit ECom.

If the files were received on a diskette from Vodavi Communications, follow these instructions.

1. Place the diskette you received in the disk drive of the laptop or PC.
2. Connect the voicemail unit to the laptop or PC.
3. Access the voicemail unit via ECOM.
4. Click Send next to +DIE0.
5. At the c:\HELLO> prompt type CD\ and press [Enter].

6 Type ZMR and press [Enter].
7 Choose File ->Upload ->OK.
8 Choose ZModem and press OK.
9 Double-click the UPDATES directory.
10 Highlight xxxxxxxx.zip and click Add.
11 Click OK.
12 A screen displays that shows the upload status of the files. When the upload is complete, the c:\ prompt displays.
13 At the C:\ prompt type PKUNZIP -D -O xxxxxxxx.zip and press [Enter].
14 Type REBOOT and press [Enter].
15 The system shuts down and the upgrade is complete.
16 Exit ECom.

7 Technical / Troubleshooting

Overview

This section provides information on diagnosing problems that may occur on the Digital Voice Processing System. The information in this section is highly technical and unless the procedures are performed as instructed, the system may fail to operate. A good working knowledge of DOS and PC-based systems is essential.

LED Sequences

LED Sequence:

. = off
o = low intensity
O = high intensity
S = blinking

Normal LED Boot Sequence

LED 12345678	Description	If system does not progress...
???? ????	Boot-up checking – see below	Cables disconnected. Memory SIMM loose.
O...	Checking hard-drive and other system resources	Hard drive problem. Boot with Ecom to view errors.
.O..	Configuring system	File problem. Re-index databases.
..O.	Setting modem	
...O	Starting the voice processing	Key file missing. Invalid number of ports. Configuration files not valid.
OO..	2 port system ready to answer	System ready
OOOO	4 port system ready to answer	System ready
OOOO OO..	6 port system ready to answer	System ready
OOOO OOOO	8 port system ready to answer	System ready
OSOO	4 port system, port 2 active	System working
.... O...	System parked	Power unit on and off to restart
.... .O..	System re-booting	Wait for re-boot.

Other Error Conditions

LED 12345678	Description	Diagnosis
No Lights	System not booting.	BIOS failure, BIOS chip loose. Open unit and reconnect.
O... o.o.	No memory found.	Memory SIMM loose, disconnected or failed. Open unit and reconnect.
oO.O o.o. 20 seconds O.oo o o	No boot-able device.	Hard drive data or power cable disconnected. Hard drive failure. Open unit and reconnect.
oO.O OOOo	System not booting.	Hard drive not connected to the motherboard. Open unit and reconnect.
O... O.O.	Memory SIMM is disconnected.	Open unit and reseat the memory SIMM.

Looking at Boot Up

Once power is reapplied to the Voice Processing System, a PC boot-up screen displays:

```
General Software 80386 Embedded BIOS (tm) Version 4.0
Copyright (C) 1992-1997 General Software, Inc.
Connected Systems Dolphin

Wait.....



(C) 1996 General Software, Inc.
80386-4.0-01F3-FA4E
```

Next, the system CMOS BIOS configuration screen displays:

```
+-------------------------------------------------------------------------+
|          SYSTEM BIOS CONFIGURATION, (C) 1996 GENERAL SOFTWARE, INC.     |
+-------------------------------------+-----------------------------------+
| System CPU           : 80386        | Low Memory          : 703KB       |
| Coprocessor          : Disabled     | Extended Memory     : 3072KB      |
| Drive A: Type        : RFD Disk(n/a)| Drive C: Type       : 49          |
| Drive B: Type        : Not installed| Drive D: Type       : 0           |
| System Video         : Auto         | Serial Ports        : 03F8        |
| ROM Shadowing        : Enabled      | Parallel Ports      :             |
| Embedded BIOS Version: 3.5IDE       | Manufacturing Mode  : 03F8 / 19K  |
+-------------------------------------+-----------------------------------+
Starting PC DOS...
```

Then the system boots:

```
HIMEM: DOS XMS Driver, Version 3.15 - 05/30/94
Extended Memory Specification (XMS) Version 3.0
Copyright (C) IBM Corp. 1988, 1994

Installed A20 handler number 2.
64K High Memory Area is available.

IBM Expanded Memory Manager 386  Version 4.50
Copyright (c) IBM Corp. 1986, 1994

EMM386 successfully installed.

  Available expanded memory . . . . . .  3008 KB

  LIM/EMS version . . . . . .   4.0
  Total expanded memory pages . . . . . .   216
  Available expanded memory pages . . . . .   188
  Total handles . . . . . .    64
  Active handles  . . . . . .     1
  Page frame segment  . . . . . .  E000 H

  Total upper memory available  . . . . . .    95 KB
  Largest Upper Memory Block available  . .    95 KB
  Upper memory starting address . . . . . .  C800 H
```

```
EMM386 Active.

Dolphin Advanced Power Management V2.0.
System APM support detected and initialized

C:\>set VSICFG=0xC000 0x310 10 C D

C:\>set PATH=C:\;C:\DOS;C:\UTILS;C:\HELLO\SYSTEM
C:\>set TEMP=C:\TEMP
C:\>set VSIXMSMEM=1
C:\>lights ff3f 0
C:\>smartdrv /X
C:\>cd\
C:\>makekey

found key file - exiting
C:\>cd\hello\dsp
C:\HELLO\DSP>call denv
C:\HELLO\DSP>call testenv
C:\HELLO\DSP>set VSICFG=0xC000 0x310 10 C D
C:\HELLO\DSP>set LDSPPATH=loaddsp -v evp.bin
C:\HELLO\DSP>dinit

DInit Version 1.0 03/09/98
(C)opyright 1998 Santa Barbara Connected Systems Corp. All Rights Reserved
Usage: DInit [channel number]

Clock via channel 1
Enabling  channel 1
C:\HELLO\DSP>loaddsp -v evp.bin

LOADDSP DSP Image Loader   Version 1.6  08/Apr/97
(C)opyright 1997 Santa Barbara Connected Systems Corp. All Rights Reserved.
    Hardware Interrupt 10
    IO base address 310
    Memory Segment c000

C:\HELLO\DSP>
C:\HELLO\DSP>cd\hello

C:\HELLO>regadd "DisableXSIAM=1"
```

```
REGADD: DisableXSIAM=1

C:\HELLO>chk_port
10/13/98 13:28:13 SETPORT (Build:2) VSI Channels=8 Registry Channels=8 Return Er
ror Level=0
REGADD: DisableXSIAM=0
Configuring system...
Modem to auto-answer...
AT
AT S0=1 Q1
Loading voice engine...
+OK
```

Boot Up Problems

Q: All lights on the system turn on and the system appears to boot normally, but calls are not being answered.

A: The cable from the motherboard to the voice card(s) is not connected. Open the voicemail unit and reconnect the voice cards to the motherboard.

Q: The system boots properly and the batteries are installed. When the power is removed, then is re-applied, the date and time are not maintained.

A: Check the status of the batteries. Make sure they are seated properly and are charged. Also, open the unit and make certain the battery connection is tight, via JP10.

ECom

ECom is the communications program shipped on the Laptop/PC Administration diskette. ECom is a 16-bit Windows program that communicates directly with the Digital Voice Processing System and provides access to DOS functions and debugging information.

It is suggested to use the supplied ECom application because Ecom supports transferring of files between the Digital Voice Processing System and the PC, via the ZModem protocol.

Anytime the system is accessed via ECom, Laptop/PC Admin must be shut down.

The following screen shows ECom:

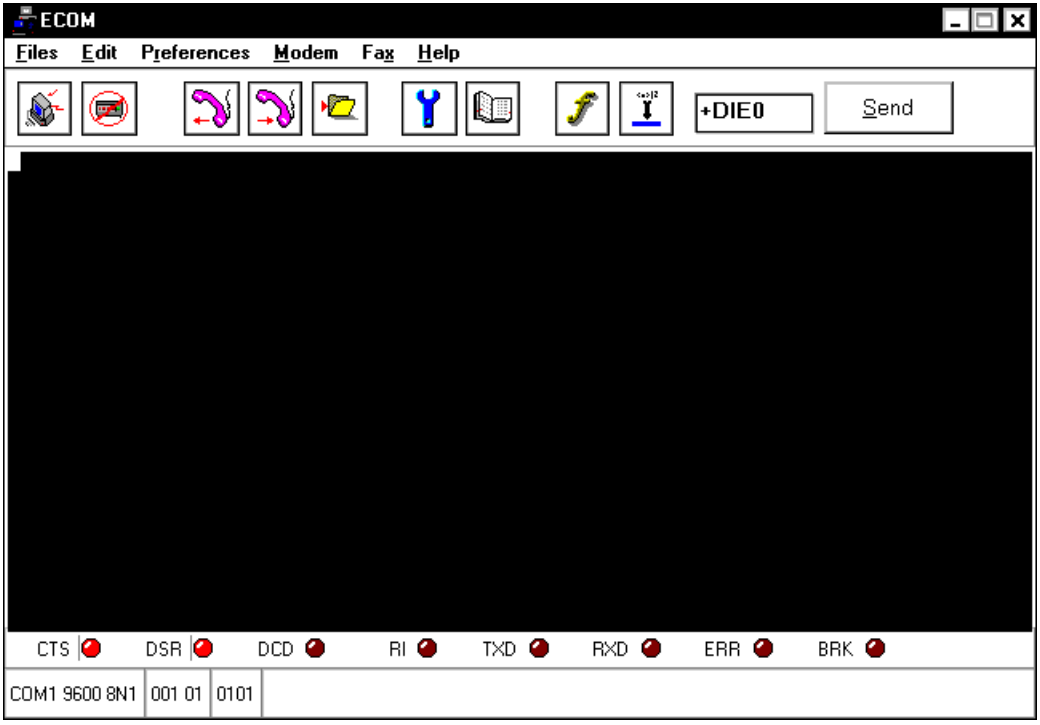


Figure 7-1. ECom Screen

Com Port Options

Press [ALT]+[P] from the ECom screen to access the Com Port Options screen as shown below:

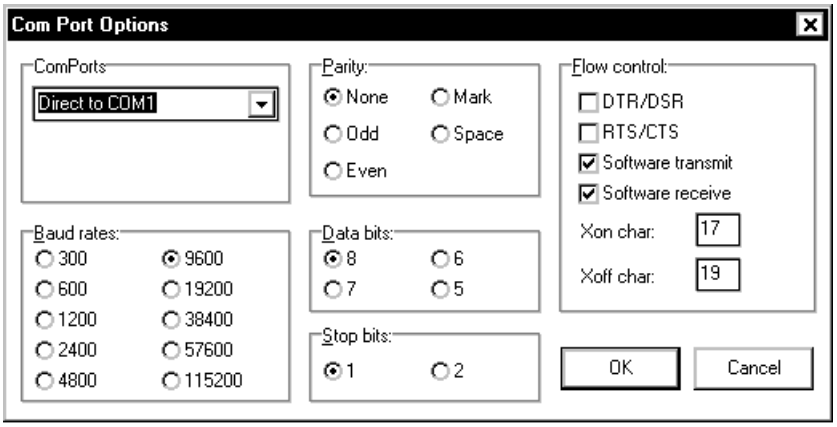


Figure 7-2. Com Port Options

The default communications port options are as follows:

Com Ports

Defines the Com Port connecting to the Laptop/PC.

Baud Rates

Default is 9600. This baud rate must match the BaudRate setting in your Registry.

Parity

Default is None.

Data Bits

Default is 8.

Stop Bits

Default is 1.

Flow Control

Software Transmit and Software Receive must be checked. XOn Char should be 17 and XOff Char should be 19.

Modem Connection

The modem connection, via ECom, works the same whether the modem is connected or there is a direct connection to the Digital Voice Processing System.

To access modem features, press [ALT]+[D]. The modem dial screen displays.

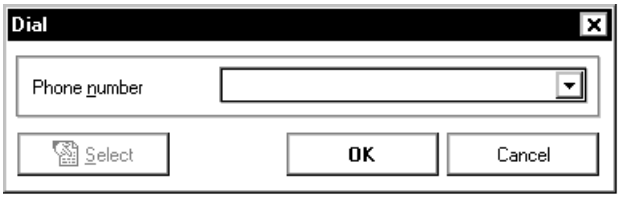


Figure 7-3. Modem Connection

Once the modems are connected, all features described in this section are supported. There is a phone book, similar to the phone book for the Laptop/PC Administration software. Use this phone book to enter the remote site name and telephone number and save this information.

Shut Down and Park

The voicemail system must be shut down and parked to access DOS or debugging functions. Shut down and park the system in any of three ways:

1 Access the Online Administration program by getting into a mailbox and accessing supervisor functions, then press [8], [3], [1] to shut down and park the system. Start ECom and press [Enter] until the C:\HELLO> prompt displays.

If the voicemail system is shut down and parked, the modem connection is dropped. The system must be recalled for access.

2 Via the laptop/PC administration program Select Setup, Advanced, Shutdown, and Shutdown and Park unit. Exit the Laptop/PC Admin module. Start ECom and press [Enter] until the C:\HELLO> prompt displays.

3 Via the ECom program, connect to the Digital Voice Processing System. Press Send next to +DIE0 to display the C:\HELLO> prompt.

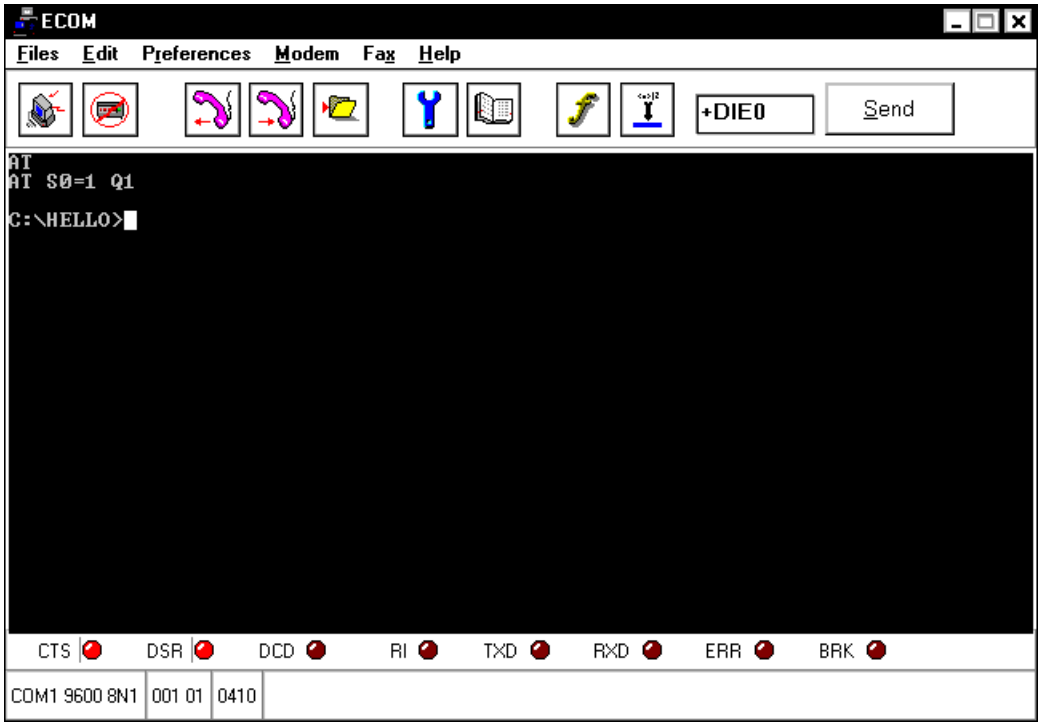


Figure 7-4. Hello Prompt

Access to DOS functions is available, including directory and type commands.

Debug Mode

From the DOS prompt the voicemail system can be brought up in debug mode. If VMDEBUG is typed at the C:\HELLO> prompt, the system comes up in a communicative mode. In debug mode, the Administration program will not run. The following screen shows how the voicemail looks when the system is ready to take calls in its non-stealth mode.

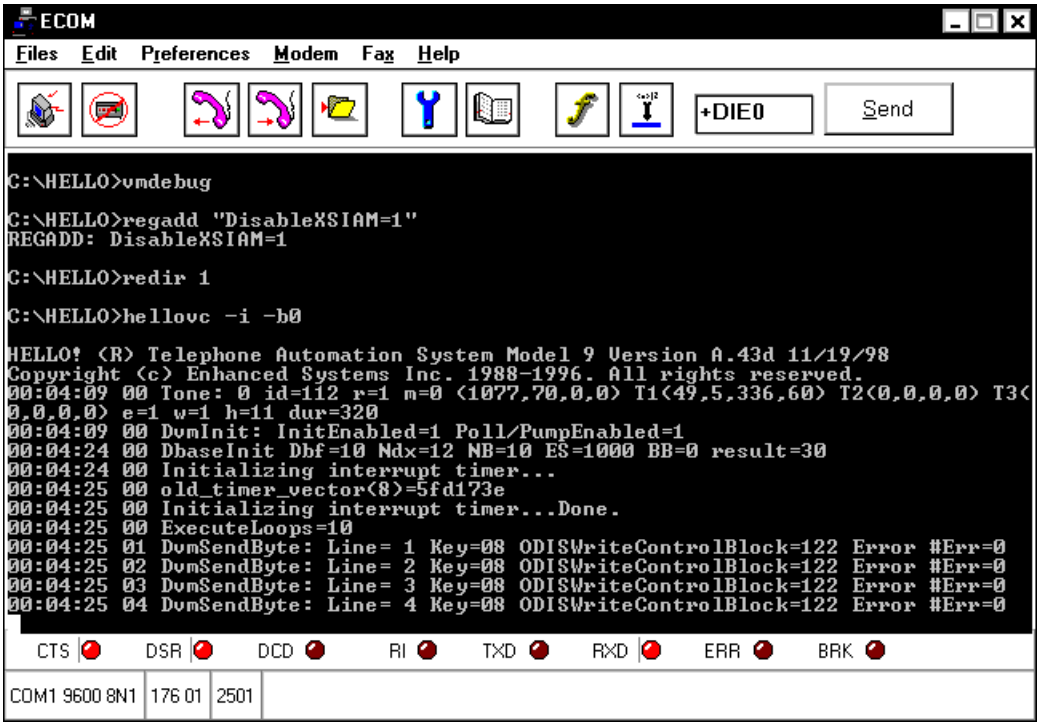

ECOM
Files Edit Preferences Modem Fax Help
+DIE0
Send
C:\HELLO>vmdebug
C:\HELLO>regadd "DisableXSIAM=1"
REGADD: DisableXSIAM=1
C:\HELLO>redir 1
C:\HELLO>hellovc -i -b0
HELLO! (R) Telephone Automation System Model 9 Version A.43d 11/19/98
Copyright (c) Enhanced Systems Inc. 1988-1996. All rights reserved.
00:04:09 00 Tone: 0 id=112 r=1 m=0 (1077,70,0,0) T1(49,5,336,60) T2(0,0,0,0) T3(
0,0,0,0) e=1 w=1 h=11 dur=320
00:04:09 00 DvmInit: InitEnabled=1 Poll/PumpEnabled=1
00:04:24 00 DbaseInit Dbf=10 Ndx=12 NB=10 ES=1000 BB=0 result=30
00:04:24 00 Initializing interrupt timer...
00:04:25 00 old_timer_vector(8)=5fd173e
00:04:25 00 Initializing interrupt timer...Done.
00:04:25 00 ExecuteLoops=10
00:04:25 01 DvmSendByte: Line= 1 Key=08 ODISWriteControlBlock=122 Error #Err=0
00:04:25 02 DvmSendByte: Line= 2 Key=08 ODISWriteControlBlock=122 Error #Err=0
00:04:25 03 DvmSendByte: Line= 3 Key=08 ODISWriteControlBlock=122 Error #Err=0
00:04:25 04 DvmSendByte: Line= 4 Key=08 ODISWriteControlBlock=122 Error #Err=0
CTS DSR DCD RI TXD RXD ERR BRK
COM1 9600 8N1
176 01
2501

Figure 7-5. Debug Mode

Note that the system displays the log line:

```
I!XSIAM Info: XSIAM Shutting down for a short nap
```

The system is ready to receive voicemail calls. Logging information displays on the ECom screen and is written to the logs.

To exit Debugging mode, press [3] from the ECom screen. The voicemail system is parked again. To restart the voicemail system, type REBOOT and the system reboots. It is then safe to exit the ECom program.

To display more logging information in the unit, add a registry parameter *ModuleDebug*. ModuleDebug accepts several parameters as shown in the following table:

Basic Foundation	H!		Voicemail	Vm
Auto Attendant	Aa		Menus	Mn
Voicemail Owner	Vo		Directory	Di
Events	Ev		Message Manager	Mm
Time Control	Tc		Integration	In
Command File	Cf		Database	Db
Distribution List	Dl		Notification	No

Table 7-1. Module Debug Parameters

For example, to see if the menus and time controls are configured correctly, go into Admin module and insert the ModuleDebug name with a value of `TcMn`. Or, access the system via ECom and at the DOS prompt type `REGADD "ModuleDebug=MmTc"`

Module Debugging must be turned off when troubleshooting is complete. To turn off Module Debug, type `REGADD "ModuleDebug="`

Download

Upload and download files to the Digital Voice Processing System in ECom. To download or send a file from the Digital Voice Processing System to the laptop/PC, do the following:

1 Make certain the Digital Voice Processing System is shut down and parked.

2 From the C:\HELLO> prompt, type ZMS <filename> and press [Enter].

If the file to download is not in the C:\HELLO directory, move to the correct directory to type the ZMS command.

3 The system displays a status screen (shown below).

4 When the download is complete, the system returns to the C:\HELLO> prompt.

5 The file is downloaded to the C:\Admin directory on the local hard drive.

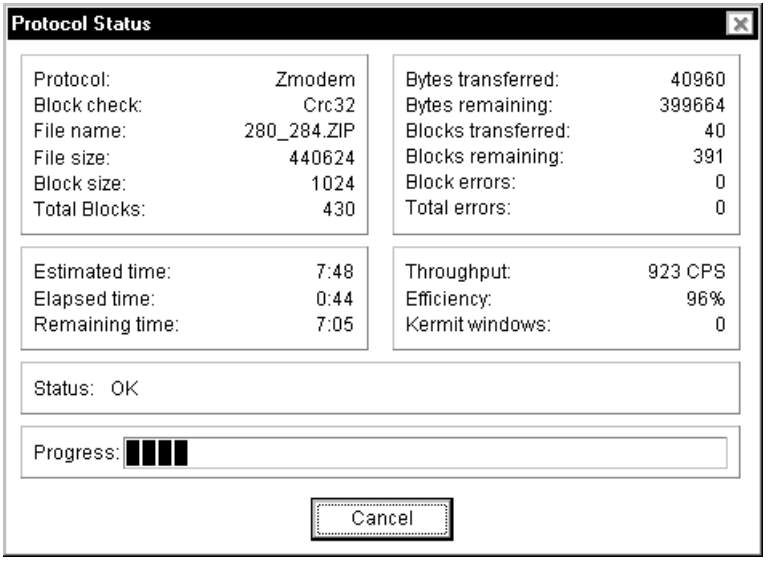


Figure 7-6. Protocol Status

Upload

To upload a file from the Laptop/PC to the Digital Voice Processing System, do the following:

1 Make certain the Digital Voice Processing System is shut down and parked.

2 Type `CD \` and press [Enter]. The file uploads to the `C:\` directory.

3 Type `ZMR` and press [Enter].

4 Press [Page Up].

5 The system prompts for the transfer protocol to use.

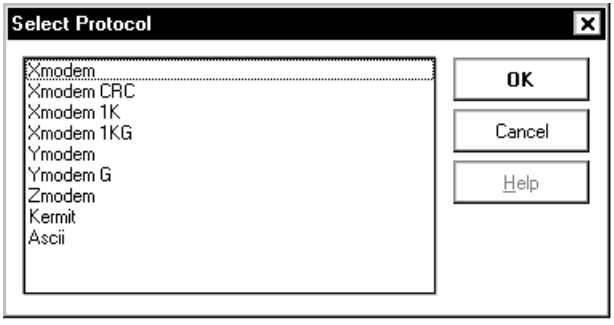


Figure 7-7. Select Protocol

6 The next screen prompts for files to transfer. Double-click the file(s) to transfer. They are listed in the Outgoing Files box.

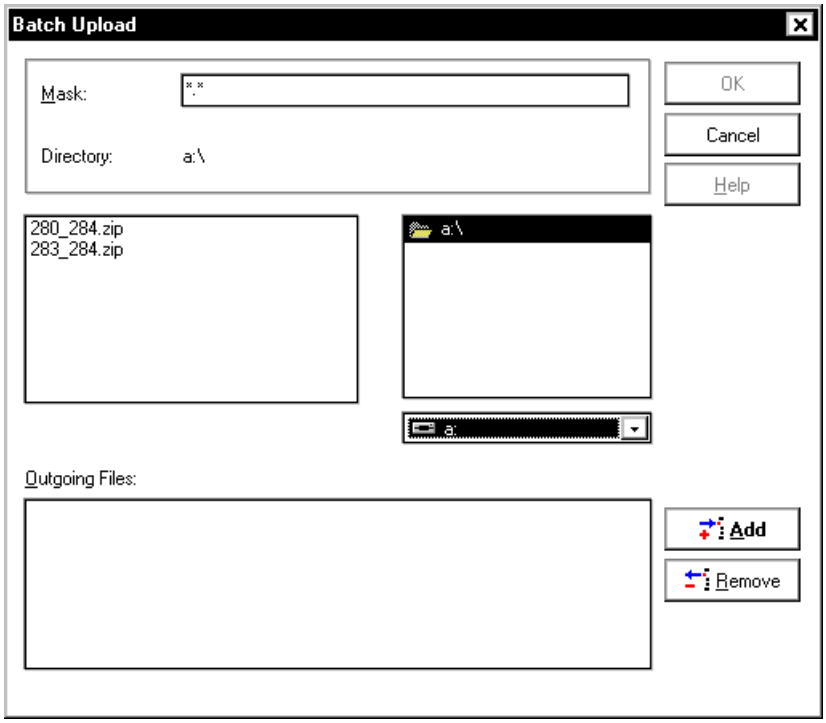


Figure 7-8. Batch Upload

7 After selecting the appropriate files, click Add, then OK and the file transfers begin.

The screen changes to a protocol screen showing the upload status. When complete the C:\ prompt displays.

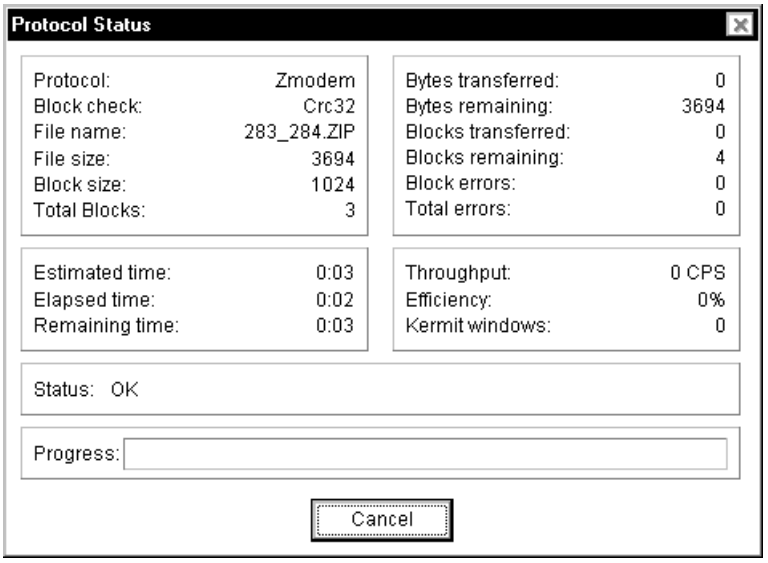


Figure 7-9. Protocol Status

Parking the System

Many troubleshooting and updating techniques require that the Digital Voice Processing System be *parked* before the system is accessed. Normally, the Digital Voice Processing System is *running,* accepting phone calls, etc. When the system is *parked*, it is no longer taking phone calls, instead is waiting for DOS commands.

Park a system one of three ways:

1 *Via Windows Admin*: Select Setup, Advanced, Shutdown. Select Shutdown and Park unit. Admin then disconnects.

2 *Via Telephone*: Access any mailbox. At the mailbox greeting, press [*] followed by the password for that mailbox. Press [7] for administrator functions. If prompted for a password type 2275. Press [8], [3], [1].

Once the system is parked, voice calls cannot be made into the system.

3 *Via ECom*: Send to the Digital Voice Processing System the string `+DIE 0` followed by `CR/LF`. From ECom press Send in the top right-hand corner of the screen.

If a modem is connected, the parking process disconnects the modem.

Once a system is parked, restart the system so it processes phone calls by doing the following:

Unplug the power, wait 5 seconds, and re-apply power
OR
At the DOS prompt, type `REBOOT` and press [Enter].

Once the system is parked, use ECom to execute DOS commands and transfer files. Pressing [Enter] displays the DOS prompt: `C:\HELLO>`.

Executing DOS Commands

The Digital Voice Processing System supports most DOS commands, including `cd`, `dir`, `copy`, `move`, etc. The following are utility programs on the Digital Voice Processing System that may help diagnose problems.

LASTLINE.EXE

Shows the last lines of a text file. On the command line specify the file name and number of bytes to display. Run `LASTLINE` by itself to show help. Useful for viewing the end of a log file.

LATEST.EXE

Lists the last 20 files on the system. Accepts `-S` to search sub-directories. Also accepts wild cards. Run `LATEST ?` for help. Useful for locating new files on the system.

BIGGEST.EXE

Lists the largest 20 files on the system. Accepts `-S` to search sub-directories. Also accepts wild cards. Switch allows display of smallest files. Run `BIGGEST ?` for help. Useful in diagnosing where disk space is used.

DIRSIZE.EXE

Lists the total size of files in each directory. Useful in determining where disk space is used.

GREP.COM

Extracts text lines from a text file based on matching rules. Useful in extracting log lines for a particular mailbox or extension, or gathering log lines for a particular time of day. Type `GREP ?` for more information.

MAKEKEY.EXE

Displays the system serial number.

Transferring Files

The Digital Voice Processing System can transfer files via the ZModem protocol. Since the Digital Voice Processing System communicates at 9600 baud, it is suggested to use ZIP compression on files before transfer.

Before file transfer occurs, the Digital Voice Processing System must be parked. Once the system is parked, use ECom and DOS commands to navigate through the directory structure. Change the directory to the location where files are uploaded or downloaded.

To transfer files from the PC to the Digital Voice Processing System (upload) the steps are:

1. Park the system.
2. Make sure the file is prepared (edited, saved, compressed, etc.) on the laptop/PC.
3. On the Digital Voice Processing System, get into the DOS directory where the file is to be uploaded.
4. Ensure the file does not already exist.
5. On the Digital Voice Processing System execute a `ZMR` (Zmodem Receive) command.
6. From Ecom, select upload a file using the Zmodem protocol. Then select the file to send.
7. After the file transfer completes, the DOS prompt displays.

To transfer files from the Digital Voice Processing System to the PC (download):

1. Change directories on the Digital Voice Processing System to the file location.
2. Run `ZMS` (Zmodem Send) with the file name and the extension. For example, to download the file `TEST.ZIP` from the Digital Voice Processing System, run: `ZMS TEST.ZIP`
3. The terminal emulation program then downloads the file.
4. After the file transfer is complete, the DOS prompt displays.

Advanced users can use fast ZMS and fast ZMR.

Backing Up the System

To back up the data on the Digital Voice Processing System, it must be parked first. Back up the Digital Voice Processing System at three levels. The first level is to back up the DBASE directory:

1. Access the system via ECom.
2. Press Send next to +DIE0.
3. At the `C:\HELLO>` prompt, type `BACKUP1` and press [Enter]. A confirmation to backup the system displays.
4. Press [Enter]. The backup completes and the system prompts to download the system backup.
5. Press any key to begin the download. To not download the files, press [CONTROL]+[SHIFT]+[C], then press [Y].

If [CONTROL]+[SHIFT]+[C] is pressed, the backup must be downloaded later.

The next level of backup includes the previous level and subscriber greetings, menus greetings, and other static voice prompts:

1. Access the system via ECom.
2. Press Send next to +DIE0.
3. At the `C:\HELLO>` prompt, type `BACKUP2` and press [Enter]. A confirmation displays to backup the system.
4. Press [Enter]. The backup completes and the system prompts to download the system backup.
5. Press any key to begin the download. To not download the files, press [CONTROL]+[SHIFT]+[C], then press [Y].

If [CONTROL]+[SHIFT]+[C] is pressed, the backup must be downloaded later.

The final level of backup includes `BACKUP1`, `BACKUP2`, and Voice Messages. This backup may take several hours to download.

1. Access the system via ECom.
2. Press Send next to +DIE0.

3 At the C:\HELLO> prompt, type BACKUP3 and press [Enter]. A confirmation displays to backup the system.

4 Press [Enter]. The backup completes and the system prompts to download the system backup.

5 Press any key to begin the download. To not download the files, press [CONTROL]+[SHIFT]+[C], then press [Y].

If [CONTROL]+[SHIFT]+[C] is pressed, the backup must be downloaded later.

Restoring System Backup

The instructions below describe how to restore a system backup. To restore data on the Digital Voice Processing System, the system must be parked first.

The following are general instructions for restoring backup files. Connect the Digital Voice Processing System unit to the host computer, then use these DOS commands:

BACKUPx.ZIP represents the name of the file to restore, and x is a variable for any number or character.

1 CD \
2 ERASE BACKUPx.ZIP
3 ZMR BACKUPx.ZIP
4 PKUNZIP -D -O BACKUPx.ZIP
5 REBOOT

Restore the backup of the Digital Voice Processing System at three levels. The first level is to restore databases that contain subscriber, COS, menu, time control and system settings. To transfer files from the host system and unzip them, connect the Digital Voice Processing System unit to the host computer, then use these DOS commands:

1 CD \
2 ERASE BACKUP1.ZIP
3 ZMR BACKUP1.ZIP
4 PKUNZIP -D -O BACKUP1.ZIP
5 REBOOT

The next restore level retrieves subscriber greetings, menu greetings, and other static voice prompts. First, connect the Digital Voice Processing System unit to the host computer, then use these DOS commands:

1 CD \
2 ERASE BACKUP2.ZIP
3 ZMR BACKUP2.ZIP
4 PKUNZIP -D -O BACKUP2.ZIP
5 REBOOT

The third restore level restores everything, including voice messages. Connect the Digital Voice Processing System unit to the host computer, then use these DOS commands:

1 CD \
2 ERASE BACKUP3.ZIP
3 ZMR BACKUP3.ZIP
4 PKUNZIP -D -O BACKUP3.ZIP
5 REBOOT

If there are multiple files, execute ZMR commands for each file. After executing the ZMR command, use ECom's file transfer commands to initiate a ZModem file upload. Do this for each file to restore.

System Reinitialize

Do the following to reinitialize the database:

Do not reinitialize the system without help from Technical Support. This deletes messages and custom prompts.

1 Start the Ecom program.
2 Click SEND next to +DIE 0.
3 Click the C:\HELLO text in the screen.
4 Type REINIT and press [Enter]
5 Type REBOOT and press [Enter]. The voicemail system reinitializes.

If an incorrect number of ports is specified, the voicemail system may not run correctly.

Debug Mode

To have more logging information, add a registry parameter *ModuleDebug*. ModuleDebug accepts several parameters as shown in *Table 7-1. Module Debug Parameters*.

For example, to see if menus and time controls are configured correctly, enter the Admin module and insert the ModuleDebug name with a value of `TcMn`.

To see if your menus and time controls are configured properly, do the following (via Laptop/PC Admin):

1. Access the Laptop/PC Admin and select Setup, Advanced, Registry.
2. Find the ModuleDebug parameter. If it is there, double-click and modify the value. Otherwise, insert the value name.
3. Enter `TcMn`.
4. Click OK.

Via ECom:

1. Access ECom.
2. Press Send next to +DIE0.
3. At the `C:\HELLO>` prompt, type `REGADD ModuleDebug=MnTc` and press [Enter].

To see the active call come through the voicemail unit, run the voicemail engine in debug mode as follows:

1. Access the voicemail unit via ECom.
2. Click Send next to +DIE 0. At the `C\HELLO>` prompt, type `VMDEBUG`. This puts the system in debug mode and shows calls in the system. When XSIAM shuts down for a brief time, the system is ready to receive calls.
3. To exit debug mode, press [3]. The engine shuts down and the `C\HELLO>` prompt displays.
4. To put the system in *stealth* mode, type `VMRUN` at the DOS prompt.

Remove debugging parameters from the registry to conserve hard drive space and to maintain system speed.

Viewing the Logs

To view the logs on the Digital Voice Processing System, the system must be parked first.

On the Digital Voice Processing System, daily log files are stored on the hard drive as ASCII text files in the `C:\HELLO\LOGS` directory. There is an error log named `HELLO.ERR` that contains system level errors. There is a daily log file for each day that contains tracking information for that day's activities. The daily log files are named `HEmmddyy.LOG` where `mm` is the two digit month number, `dd` is the two digit day and `yy` is the two digit year.

Questions and Answers

Q: When I make changes to subscriber, COS, menu or time control settings, the changes do not take effect. What is the problem?

A: The Digital Voice Processing System uses an internal, per channel, cache to speed up operations. If answering the line with Menu 100 and modifications are made to menu 100 using the PC based Admin program, those changes are not effective until the system is reset. By default, caching is turned off. View the Caching setting in Admin by selecting Setup, Advanced, System Settings, then click the System Updates Take Effect Immediately option.

Q: The system does not process calls as fast as I would expect. What can I do to improve the speed?

A: Verify that the ModuleDebug registry variable is deleted from your system. Make sure the Disable System Caching option is checked and the Fax Detect option is not checked.

Q: A menu has a Time Out value. If the Time Out value is 0, then the system will not allow any key presses to activate any key actions. The system will only follow the Time Out key action.

A: The Time Out value is defined as *Specifies the length of time after which, if the caller presses no key, the Time Out action is to run*.

When the Time Out value is greater than 0 and the caller presses a key during the prompt or within the number of seconds indicated by the Time Out value, that key action is taken. If the caller exceeds the Time Out value, the Time Out action is taken. When the Time Out value is 0, the only action taken is the Time Out action. The caller may not enter DTMF keys.

When the Time Out value is set to 0, many prompt files can play in succession. An example would be to list all employees in a company, but not record them in a single prompt file. Create a series of menus with the Time Out key action to call the next menu and a Time Out value of 0.

Q: Subscriber changes (e.g., Name, Department, Password, etc.) do not *stick* when the customer reboots the unit after making a change, or looks at another list (COS, LINES, etc.) and then looks at the Subscriber list again.

A: To reproduce the problem follow the steps below in the Laptop/PC Administration Program. The solution is to restore the original subscriber database and index files on the unit. Follow these steps to restore the original subscriber database and index files:

1 Start the ECom program.

2 Click SEND next to +DIE 0.

3 Click the C:\HELLO text in the screen.

4 Type CD \HELLO\ORIG\DBASE and press [Enter].

5 Type COPY MB*.* C:\HELLO\DBASE and press ENTER. If the system prompts you to overwrite the files, press [Y], then [Enter].

6 Type COPY EX*.* C:\HELLO\DBASE and press [Enter]. If the system prompts you to overwrite the files, press [Y], then [Enter].

7 Type REBOOT. The subscriber database and index files are reinitialized.

Proceeding further will delete the subscriber database. Messages, signatures, and greetings are still available but all mailboxes will be deleted and must be recreated (enter the names, etc.).

Do NOT delete or modify the files in the C:\HELLO\ORIG\DBASE directory. They are there if the databases must be restored to their original state (in case of file corruption).

Q: The modem will not go into auto-answer mode when you power the voicemail off and on with the modem attached. What is wrong?

A: The cause of the problem is unknown at this time, but it is being investigated. When the unit is powered down and restarted, the port may be in an unrecognized state. The unit also sends a lot of information to the modem during the boot process. This problem does not occur when a reboot is done from Admin or Ecom. The problem may not always be recreated.

Follow the procedure below to resolve the problem:

1 Power off the modem.

2 Pull the power cable from the back of the voicemail unit. Wait ten seconds.

3 Put the power cord back into the unit

4 Wait until LIGHT #2 on the unit lights.

5 Turn the modem on.

6 In a few seconds, the AA light on the modem lights and the unit/modem pair functions normally. Reboot the unit via remote commands.

Contact technical support for more information or additional help.

Q: How do I set up a mailbox to have time sensitive greetings?

A: You must create a time control for the mailbox. Configure the time controls as you would like:

1 Define the dates, days, and times.

2 Set the mailbox greeting to correspond to the time sensitive greeting it should represent.

3 Set the mailbox settings to call the time control defined above.

Q: After my system plays my opening menu prompt, the system takes 8-12 seconds to respond to any keys I press.

A: If Fax Detect is enabled, the MenuFaxToneDetect value is too long. MenuFaxToneDetect determines how long the Digital Voice Processing System waits for the fax tone before returning control to the Menu. Modify the parameter in the registry to lower this value. If the MenuFaxToneDetect registry item is not in the system, insert the value. See *Appendix B* for more information on adding items to the Registry. This value can be as low as 1. When this value is set to 1, it means there is a one second pause before the menu prompt is played when fax detect is enabled.

If Fax Detect Enabled is not selected, the system may be waiting too long for Inband signaling information. Look for InBandWait in the registry. Make this value as low as possible yet allowing proper call routing. Test call situations to verify proper call routing, including call forward busy or no answer to voicemail, transfers to extensions, calls coming into the voicemail from the CO, and message waiting indicators set and clear. If the delay between the time the call is answered and when the prompt plays is still unacceptable, contact technical support for an alternate solution.

Q: The telephone system sends ring to the voicemail port, but the Digital Voice Processing System will not answer.

A: There could be many reasons for the problem. See below for possible solutions:

1 Be certain the system was started with a digital line plugged into port 1 on the Digital Voice Processing System.

2 Plug a digital station into one of the voicemail lines. Determine if the station will ring. If not, configure the phone system to ring the voicemail ports and retest.

3 Add the Registry parameter, `ModuleDebug=In` and shut down and park the system. Access the system via ECom. At the `C:\HELLO` prompt, type `VMDEBUG` and press [ENTER]. Then, generate a call into the system and look for the log line:

DEBUG: RAW CTI Packet <1> - [LXXXXXXXXXXX]

Where X is a number between 0-9. If you do not see this log line, the Digital Voice Processing System is not receiving a ring packet from the phone system. Configure the phone system to generate a ring packet.

4 Contact Technical Support.

Q: The Digital Voice Processing System seems to answer the call, but then hangs up almost immediately. What is wrong?

A: There could be many reasons for the problem. See below for possible solutions:

1 Check the time control settings. The Digital Voice Processing System may be nearing the end of the time control and there is no definition for the current date and time. If there is no definition for the current date and time the system hangs up.

2 Check the `minlcoff` parameter in the Registry. Normal ranges are between 30-60.

3 Contact Technical Support.

Q: I applied power to my Digital Voice Processing System, but the system does not boot up.

A: There could be many reasons for the problem. See below for possible solutions:

1 Ground yourself by using a wrist strap or other grounding device.

2 Remove the case and verify all internal connections.

3 Verify the connection from voice board(s) to the motherboard.

4 Verify connections from the motherboard to the hard drive.

5 Verify power connections to the hard drive.

6 Check the LED Sequence topic in this section for more details on boot up light sequence.

7 Contact Technical Support.

Q: Message Waiting Lights are not working on my system.

A: All phone systems have pre-configured Message Waiting Indicator parameters programmed. See *Appendix B* for information on the `AaMwiSet` and `AaMwiClr` parameters.

Make certain the last line on a 2, 4, 6, or 8 port system are plugged into the phone system. Notification settings are transmitted on these lines. Without telephone lines plugged into the notification ports, the Digital Voice Processing System cannot notify the telephone system of new messages.

Q: How do I modify a Command File?

A: First download the command file to the laptop/PC. Command files created by default are in the `C:\HELLO\CFILES` directory. See the instructions for downloading files from the Digital Voice Processing System to the laptop/PC.

Once downloaded, modify the command file using a text editor and save it in plain text format.

When the command file is modified, upload it to the `C:/HELLO/CFILES` directory. See instructions for uploading files from the laptop/PC to Digital Voice Processing System.

See Appendix B for Command File information.

Q: Call Queuing will not work.

A: For call queuing to work, use supervised transfers and make sure call holding is enabled.

Q: Calls are not being routed to extensions properly.

A: First, replace the Digital Voice Processing System with a digital telephone set and verify that transfers work properly without the voicemail system.

Verify the entire path by which a call is handled. Typical problems include incorrect Time Control and Menu settings. Compare the Time Control and Menu configurations to the default Time Control and Menu settings described in this manual. Use these defaults as a template when configuring the Time Control and Menu settings.

Q: I would like to see my calls processed on the screen.

A: There could be many reasons for the problem. See below for possible solutions:

1. Use the ECom program shipped on the Digital Voice Processing System administration diskette.
2. Click Send next to +DIE0.
3. When the `C:\HELLO>` prompt displays, type `VMDEBUG` and press [Enter]. The system begins to run.
4. When finished testing, press [3] to bring the voicemail system down.
5. At the `C:\HELLO>` prompt, type `REBOOT` and the system reinitializes.
6. Exit the ECom program.

Note that when using the Digital Voice Processing System in debug mode, system overhead is significantly increased. It is highly recommended to return the system to its non-debug state when troubleshooting is complete.

A Common Registry Variables

The Registry

The Registry is a database of settings (similar to the Windows 95/NT Registry) that controls how the Digital Voice Processing System operates. Changing settings in the Registry affects how the system operates. Change the Registry using the Admin program or ECom as follows:

1 *Admin*: Select Setup, Advanced, Edit Registry. From the list box select add, delete or edit.

2 *ECom*: From the DOS prompt use DOS commands to look at and edit the Registry:

REGADD

Adds and changes Registry items. Run `REGADD` with no parameters to see a usage description.

REGLIST

Displays registry values. Run `REGLIST` with no parameters to see a usage description. After making changes to the Registry that affect the system, restart the Digital Voice Processing System so the changes are effective.

Registry Variable	Description
AaBlindDelay	Amount of time between AaTransferPreXXX and sending the extension number to switch.
CallLogging	Determines what information is written to the log file. Ss= System Foundation, Vm= Voicemail, Aa=Auto-Attendant, Mn=Menus, Vo= Voicemail Owner, Tm=Time Control, Mm=Message Manager, No=Notification.
ComBaud	On the voicemail unit side, this is the baud rate from the self-contained voicemail unit. Valid baud rates are 300, 1200,2400, etc... (Default = 9600).
ComParam	For voicemail, this is the Parity, Data Bits and Stop Bits from the self-contained voicemail unit. Default is N81.
ComPort	For voicemail, this is the Com Port that the self-contained voicemail unit uses. Default is 1. (COM1) * Note that on all systems only COM1 is supported.

Table A-1. Common Registry Variables

Registry Variable	Description
DirType	Type of directory the system uses. Valid entries are Li for list mode, Si for single mode, and Pg for pager mode.
DisableXSIAM	Determines whether the XSIAM module runs. The XSIAM module enables communications between the self-contained voicemail unit and the Laptop/PC Administration program. 1 means do not run XSIAM, and 0 means run XSIAM on startup. Default is 0.
DVMDisableCID	Disable Caller ID information to the LCD screen. Default is 0 for no. Set to 1 for yes.
DVMSynchTime	Time of day (or night) the time synchronization check runs (default = 01:00:00). Time is in 24-hour clock format.
DVMTimeDiff	Time difference between the phone system time and voicemail system time. Default = 00:05:00.
DVMTimeEventGroup	Event group for time synchronization. Default = 5.
DVMXferWait	Number of seconds to wait for nor answer when using supervised transfers. Default = 15 (about 4 rings).
ExtensionLength	Number of digits for the default extensions.
flash-time	Length of flash-hook (x10msec).
lcdly	Loop current delay.
MailboxLength	Number of digits for the default mailbox length.
MaxMenuPromptLength	Maximum length of a menu prompt, in seconds.
MenuFaxToneWait	Time to wait for fax tones before the menu prompt plays.
minlcoff	Minimum time loop current must be off before a drop in loop current is detected.
MinRecordLength	Minimum time for a valid message (in seconds).
ModuleDebug	Gives additional logging information for debugging purposes. Should be turned off when the debugging process is complete. See *Section 7* for more information.
nbrdna	Number of rings before no answer is detected.
oh_dly	Off-Hook Delay: Time delay that occurs after executing a channel off-hook command. DTMF digits are not recognized while going off-hook (x10ms).
OneTouchLengthXXX	Length of time in minutes one touch recording is allowed. XXX is the COS. This overrides the Class of Service MaxMessageLength setting.

Table A-1. Common Registry Variables (Continued)

Registry Variable	Description
pause-time	Pause Time: Delay caused by a comma (,) in the dialing string (x10ms).
r_ird	Ring Interring Delay: Maximum time between incoming rings. The ring counter is reset after this time expires; rings that occur after this interval are considered the start of a new call cycle (x100ms).
r_off	Ring Off: Minimum ring voltage off duration for an incoming ring (x100ms).
r_on	Ring On: Minimum ring voltage on duration for an incoming ring (x100ms).
rings	Number of rings before a voice line answers an incoming call.
t_idd	DTMF Interdigit Delay: Delay between digits during DTMF dialing (x10ms).
Vm10DigitDial	If in the area that supports 10 digit local dialing. Useful when pressing [60] for callback while listening to a message. Set the value to 0 for the system to dial 1 before any 10-digit number. Set the value to 1 for the systm to not dial 1.
VmCleanDay	Day of the week to delete old messages. Su=Sunday, Mo=Monday, Tu=Tuesday, We=Wednesday, Th=Thursday, Fr=Friday, Sa=Saturday.
VmCleanTime	Indicates what time of day to clean up old messages (HHMM and 24-hour clock format).
VMDeleteConfirmFlush	Controls how the system handles [3] [#] to confirm deletion of a voicemail.
VmMwiResend	Resend the Message Waiting Indicator (AaMwiSetXXX).
VmTemplate	Template that the online administration uses to create a new mailbox on the system.
XOnXOff	Type of flow control being used, 0 = None, 1 = Hardware (RTS/CTS), 2 = Software (XOn/XOff))1 (Default = 2).
AdminPassword	Online administrator password (Default = 2275).

Table A-1. Common Registry Variables (Continued)

B Command Files

Overview

Command Files expand the basic system to meet the needs of special notification/paging systems, phone systems, TIE lines, and special installations. Command files can be used in three places: mailbox notification, extension forwarding, and directly from a menu.

Command File Structure

A command file is an ASCII text file with one command per line. Only the commands listed below may be used; any other lines are discarded. Lines beginning with ; (semicolon) are ignored. The command file is case sensitive and commands must be spelled as indicated below. In the list below, items in brackets, < and >, are variables and represent strings that must be supplied. Anytime a <Mailbox> or <Extension> is shown, omitting it causes the command file to use the global mailbox and extension.

Command	Description
Quit	Quit this command file and return.
OnHook	Put port on-hook.
OffHook [=Delayed]	Take phone off-hook. If =Delayed is specified, the phone is not placed off-hook until a dial or call is actually executed. This is useful when the time between the OffHook and Dial is too long.
Call=<DtmfString>	Call the number.
CallResult<07-12>=<Command...>	Branch on result of a call; 7=busy, 8=no answer, 10=connect.
LogCallResult	Log the result.
Dial=<DtmfString>	Dial the number.
Sleep=<SecondsToSleep>	Pause for seconds.
LogCallResult	Log the result.
Dial<DtmfString>	Dial the number.
Sleep= <SecondsToSleep>	Pause for seconds.

Table B-2. Command Files

Command	Description
PlayFirstMessage=[New | Save | Kill | Delete]	Play the first message. Without a parameter, the message is left as a new message. Save, Delete, or Kill also can be used to act on the message. Use Kill to delete the message after playing.
DoMessageRetrieval= <Mailbox>	Allow message retrieval.
CommandFile= <NewCommandFile>, <Path>	Run another command file.
Say= <FileName>, <Path>	Say a file.
Log= <LogString>	Log the string.
Status= <StatusString>	Show string in status box.
Console= <ConsoleString>	Put string to console.
Echo= <On|Off>	Turn Status() on or off.
Mailbox= <Mailbox>	Go to mailbox.
Extension= <Extension>	Go to extension.
Module= <ModulesName>, <glb_parameter>	Run other module.
Line <00-32>= <Command...>	Check current line.
Notify	Do notification for the global mailbox. This restarts notification for the global mailbox if the system has not extinguished the notification retries. This is similar to the *Pager Uses Retries* field in the COS record. Pager Uses Retries is inactive for command file paging. Use the Notify command to force using retries.
DtmfRead= <count>, <terminate>, <time>	Read Dtmfs.
Dtmf <String>= <Command...>	Branch on Dtmf read.
WriteDtmf= <FileName>, <path>	Append Dtmf contents to file.
HangUp= <Command...>	On hangup do (DtmfRead only).
HangUp=Off	Do not look for hangup.
Menu= <Menu Name>	Run a menu.
DialMailbox	Dial glb_mailbox.
CallMailbox	Call glb_mailbox.
DialExtension	Dial glb_extension.
CallExtension	Call glb_extension.

Table B-2. Command Files (Continued)

Command	Description
Debug= <On|Off>	Turn CommFile debugging on or off.
CallMailboxWhere	Call the number in the glb_mailbox Where field.
DialMailboxWhere	Dial the number in the glb_mailbox Where field.
DialMailboxBeeperFile	Dial the digits found in B <mailbox>.MSG.
DayOfWeek <0-6>= <Command ...>	Execute if today matches the day of the week.
Time <HH:MM>- <HH:MM>= <Command ...>	If the current time falls between the times execute the command. First time is lowest.
DeliverNewFax= <Dtmf String>	If there are new faxes for this mailbox deliver them to the number specified or to the mailbox Where field if none specified. Always uses GlbMailbox.
WhereFieldIsNotifyTimed= <On | Off>	Selects whether the WhereFields are taken from the current time period (Off) or the time period for the notification.
CancelPendingNotifies	Cancels all pending notifications for this mailbox and deletes all queued notification requests. It does not modify paging files.
PlayVoicePage	Plays the next voice page file. Only used on voice pagers. Most systems use PlayFirstMessage.
DialPrefixForWhereField	Dial the prefix assuming dial the mailboxWherefield is dialed.
DeleteAllPages	Delete all pager files (beeper files) associated with the global mailbox.
ProcessNextEvent	Process the next event for this channel group. This speeds up event handling because the channel does not return to the wait state. If the next event is a notification event, the system can process it much more quickly than if the command file did a *Quit* and returned to the main loop. If no events are due for this channel, the next instruction in the command file after ProcessNextEvent executes.
AbortIfNoPages	If no paging (beeper) files exist, abort (Quit) the command file.

Table B-2. Command Files (Continued)

Command	Description
PreDialDelay=xx PostDialDelay=xx	Use the pre- and post- dial delays to pause between taking the phone off-hook and dialing. These statements are only useful if OffHook=Delayed is also used. Normally, use these only when the execution of the command file is progressing too slowly to use the Sleep=X command.
LoadMailboxBeeperFile	Loads the next paging (beeper) file into memory so when DialMailboxBeeperFile is called, the system need not hit the disk.
PreventMboxAsPage	Prevents the mailbox number from being sent as a page.
RestartIfNewMessage	Restart this command file (with the same global mailbox) if new voice messages exist.
DeleteAllNewMessages	Delete all new messages for the global mailbox.
WaitForEvent= <Seconds>	Waits the specified number of seconds for an event.
WaitResultX= <Command..>	Use WaitResultX to break out the message.
NewMessagesXXX-XXX= <Command..>	Based on the new message count, execute the command. Also indicates different commands for execution based on the number of new messages.
DialNewMssgCount DialSavedMssgCount	Dials the DTMF digits representing the New or Saved voice message counts for the global mailbox.
GlbMailbox= <mailbox number>	Change the global mailbox to a new mailbox. Normally, when command files are used to do mailbox notification (or in paging systems), GlbMailbox is set to the mailbox number doing the notify. This command can be used to change the global mailbox. This is common for cascaded pagers.

Table B-2. Command Files (Continued)

Quick Commands

QuickCommand=<command sequence>

Quick commands replace the longer command strings with shorter mnemonic strings described below. Additionally, processing the command file is much faster when using mnemonics.

The Dw, Tw, and Dp commands are preloaded so the information (page file or the Where field for the mailbox) is loaded and the complete Quick Command executes very quickly.

Command	Description
Qu	Quit
On	OnHook
Of	OffHook
Sl	Sleep, requires one digit seconds, Sl5 = Sleep=5,Sl5Sl5=Sleep=10
Dw	DialMailboxWhere
Dp	DialMailboxBeeperFile, dials pager file
Pm	PlayFirstMessage, followed with d=Delete, s=Save n=New
Ne	ProcessNextEvent
Za	Zap (erase) all messages
Ap	Abort if no pages
Rp	Restart if pages exist
No	Notify
Tw	Where field is timed. (placed before Dw)
Rn	Restart if new messages.

Table B-3. Quick Commands

Example: QuickCommand=OfSl1DwSl3DpSl1OnNeQu is equivalent to:

```
OffHook
Sleep=2
DialMailboxWhere
Sleep=3
DialMailboxBeeperFile
Sleep=1
OnHook
ProcessNextEvent
Quit
```

Although not as fast, this works. Combine Quick Commands and regular commands as follows:

```
QuickCommand=OfSl1DwSl3
DialMailboxBeeperFile
Sleep=1
QuickCommand=OnNeQu
```

Technical

When creating a command file for pager notification, the timing of the digits sent from the voicemail system to the pager is critical. The command file must be sychronized with the timing of the pager being used. When determining the timing of the pager, call the paging company, then calculate the amount of time from when you dialed the last digit to the pager company and the time the pager company asks that the digits be sent to the pager. Modify the Sleep time to be the calculated time for the digits sent to the pager.

For additional information, please contact technical support.

Predefined Command Files

The self-contained voicemail unit has several predefined command files that are located in the \HELLO\CFILES subdirectory. There are two groups of command files: 0XX.CF and 1XX.CF. The 0XX.CF files are: 006.CF, 008.CF, 010.CF, 012.CF, 014.CF, 016.CF, 018.CF, 020.CF, 022.CF, and 024.CF. The 1XX.CF files are: 106.CF, 108.CF, 110.CF, 112.CF, 114.CF, 116.CF, 118.CF, 120.CF, 122.CF, and 124.CF. The last two digits of the filename describe the number of seconds after dialing the pager number (but before sending the mailbox digits to the paging company). All notification scripts send the mailbox number, an ✳ (asterisk), an urgent message count, another ✳ (asterisk), a new message count, another ✳ (asterisk), and the saved message count. The difference between 0XX.CF and 1XX.CF files is how the script handles messages forwarded to a mailbox.

0XX.CF files handle messages forwarded to the mailbox by sending the originating mailbox to the pager. 0XX.CF files send the originating number, an ✳ (asterisk), an urgent message count, another ✳ (asterisk), a new message count, another ✳ (asterisk), and the saved message count. For example, mailbox 101 forwards a new message to mailbox 123. Mailbox 123 has no urgent new messages, the new message forwarded from mailbox 101, and 15 saved messages. The 0XX.CF notification script sends 101✳0✳1✳15.

Below is a sample of the pager file (it is from 010.CF):

```
OffHook
Sleep=2
DialPrefixForWhereField
Sleep=3
DialMailboxWhere
Sleep=10
DialMsgSource
MsgSourceOk=Dial=✳
Dial=✳
DialUrgentMsgCount
Dial=✳
DialNewOnlyMsgCount
Dial=✳
DialSavedMsgCount
Dial=#
OnHook
Notify
Quit
```

1XX.CF files handle messages forwarded to the mailbox by sending the originating mailbox to the pager. 1XX.CF files send the originating mailbox number, an ✳ (asterisk), an urgent message count, another ✳ (asterisk), and the saved message count. For example, mailbox 101 forwards a new message to mailbox 123. Mailbox 123 has no urgent new messages, the new message forwarded from mailbox 101, and 15 saved messages. The 1XX.CF notification script sends 123✳0✳1S15.

Below is a sample of the pager file (it is from PAGER110.CF):

```
OffHook
Sleep=2
DialPrefixForWhereField
Sleep=3
DialMailboxWhere
Sleep=10
DialMailbox
Dial=✳
DialUrgentMsgCount
Dial=✳
DialNewOnlyMsgCount
Dial=✳
DialSavedMsgCount
Dial=#
OnHook
Notify
Quit
```

Modifying Command Files

To modify a command file, download the file to the laptop/PC as follows:

1. Access the Digital Voice Processing System via ECom.
2. If the system is not already parked, click Send next to +DIE0.
3. Type CD CFILES and press [Enter].
4. Download the pager file to modify by typing ZMS <filename>, where <filename> is the pager file to modify.
5. The system sends the file to the laptop/PC in the C:\ADMIN directory.
6. Modify the file using any text editor and save the file as plain text.
7. Type REBOOT and press [Enter]. The system reboots.

Once the file is modified, upload it to the laptop/PC as follows:

1. Access the Digital Voice Processing System via ECom.
2. Make certain the unit is parked. If not, park the Digital Voice Processing System by clicking Send next to +DIE0.
3. Type `CD CFILES` and press [Enter].
4. Type `ZMR` and press [Enter].
5. Press [PgUp].
6. Select ZMODEM protocol and click OK.
7. Select the files to download to the unit and click OK.
8. When the `C:\HELLO\CFILES` prompt displays, type `REBOOT` and press [Enter] to reboot the Digital Voice Processing System.

C Installation Forms

Job Name: _____ Sales Rep:_____

End User Contact (Administrator): _____ Phone: _____

End User Contact responsible for recording custom prompts: _____

Installer: _____ User Trainer:_____

Installation Dates: Start:_____ Complete: _____

End User Training: _____

Telephone System Information

Type of telephone system (brand and model): _____

How many digits are there in the telephone system's station or extension numbers? _____

List the digital port extension numbers that are to be used for voicemail Ports:

1_____ 2_____ 3_____ 4_____ 5_____ 6_____ 7_____ 8_____

What is the telephone system's voicemail group number or numbers? _____

Voicemail Equipment Considerations

Where is the voicemail system to be located? _____

Is this location environmentally stable (air conditioned & heated)? Yes☐ No☐

Will the systems be connected to a dedicated and grounded 120 volt, 60 Hz AC outlet? Yes☐ No☐

Questions on this page answered NO represent less than ideal conditions and may cause immediate or delayed malfunctions, or may disrupt certain voicemail and telephone system capabilities.

Voicemail Functions

Number Of Voice Mailbox Users (Subscribers): _____

Number of Internal Subscribers (who have a phone in the telephone system): _____

Number of External Subscribers (who do not have a phone in the telephone system): _____

Are internal subscribers going to forward their phones to their mailboxes? Yes☐ No☐

Will the telephone system provide Preset Call Forwarding to voicemail? Yes☐ No☐

Will Subscribers use Pager Notification? Yes☐ No☐

Automated Attendant Functions

When is Automated Attendant to be used? Daytime _____ Night _____ Both _____ Never _____

Will Automated Attendant be used as an overflow answering point (to help the live system operator)? _____

Number of CO Lines to be directly answered by Automated Attendant : _____

FAX Detection - Will the system be set to automatically route Fax calls? Yes☐ No☐

Fax phone number or extension number: _____

Operator-What do telephone system users normally dial to reach the system Operator? _____

INSTALLATION FORM - Subscriber Information

Complete one copy of this form for each Subscriber or group of Subscribers

Subscriber Name or Group Description: _____

Mailbox/Extension Number(s): Department: _____

Class Of Service (COS): _____

Mailbox Settings

Operator:_____ Cascade:_____ Mailbox Time Control (special use): _____

Mailbox Action Play Greeting: Yes☐ No☐

Action: Destination: _____

Notification:_____ Phone Number: _____

Pager Notification: Yes☐ No☐ Time (if timed notification): _____

Extension Settings

Extension Time Control (special use): _____

Action 1 - when calls are first transferred to the extension

Action: _____ Destination: _____

Supervised Transfer Options (circle one): Screen Caller ☐ Allow Holding ☐

Action 2 - ☐ Do Always ☐ Only On Busy ☐ Only On No Answer

Action: _____ Destination: _____

Supervised Transfer Options (circle one): Screen Caller ☐ Allow Holding ☐

Action 3 - ☐ Do Always ☐ Only On Busy ☐ Only On No Answer

Action: _____ Destination: _____

Supervised Transfer Options (circle one) : Screen Caller ☐ Allow Holding ☐

Complete one copy of this form for each Class Of Service

COS Name (number): _____ Description: _____

General Settings

Time Control (special use): _____ Restrict Outdial - Number of digits: _____

User Type: (01=normal, 99=Administrators) Event Counter (check one): ☐Owners ☐Callers

Message Settings

Message Type: ☐Voice ☐Page

Default Message Type: ☐Voice ☐Page ☐Play Message Type Menu

Message Properties: Length: _____ (sec) Count:_____ (messages) Retention: _____ (days)

Record Key - Wait for key press before recording messages? Yes☐ No☐

Greeting Types: ☐Personal ☐System ☐Class Of Service ☐Voice Insert
☐System Add On Greeting Length:_____ (sec.)

Park and Page active? Yes☐ No☐

Callers: Stop Record Key: _____ Record Options On? Yes☐ No☐

Send Options: ☐No Options ☐Urgent ☐Confidential ☐Last Option On or Off: _____

Maintenance Settings

First Time Help (circle one)? Yes☐ No☐ Say Date and Time type: _____

Message Order: ☐First in - First Out ☐Last In - First Out

Owner Play Options: ☐Save Messages ☐Forward Messages ☐Dial Source
☐Confirm Delete ☐Reply To Messages ☐Skip Messages

Owner Send Options: ☐Not Allowed disallow the following options ☐Urgent ☐Future Delivery
☐Confidential ☐System List ☐Outside
Number ☐Confirmation

COS Name (number): _____ Description: _____

Maintenance Settings (continued)

Owner Edit Options:
☐Password ☐Delete Message Sent ☐Auto Attendant
☐Greeting ☐Mailbox State ☐Notepad
☐Name/Signature ☐Personal Lists ☐Transfer Out
☐Notification ☐Guest Mailboxes

Notification Settings

When will the system set Message Waiting? _____

Message Wait Set Sequence:(special use) _____

Message Wait Clear Sequence:(special use) _____

Event Handler Group: _____ (special use - default is 5)

Voice Notification Options: ☐Password Required ☐Message Pick-Up Allowed

Cascading: When will Cascade occur? _____ ☐Urgent Only Option

Cascade Message Save / Delete Options: ☐Save as New ☐Delete Original ☐Save Original

Notification Interval: _____ (minutes) Notification Attempts: _____ (number of tries)

Pager Retries? Yes☐ No☐ Notification Script:_____
(special use - default is Pager12.CF)

Auto Attendant Settings

Call Options: ☐Blind Transfer ☐Call Screening ☐Supervised Transfer ☐Call Holding

Hold Interval: _____ (sec.) Hold Type: _____

Call Queuing? Yes☐ No☐

Screen Length: _____ (sec.) Play Original?: Yes☐ No☐

Transfer Prefix: _____

Transfer Suffix: _____

INSTALLATION FORM - Menu Information

Complete one copy of this form for each Menu

Description: _____

Number: _____ Password:_____ Time Control:_____ (special use)

Instructions: _____
(special use - This is the Menu's number .VOX file name for prompts.)

Time Out: _____ (sec.) Max Retries:_____ (number of retries before hangup)

Keys Actions - including additional parameters: mailbox numbers, menu numbers, etc.

✳ _____

_____

0 _____

1 _____

2 _____

3 _____

4 _____

5 _____

6 _____

7 _____

8 _____

9 _____

Prompt script for this mailbox - to be recorded via Administrator

_____
_____
_____
_____

INSTALLATION FORM - Time Control Settings

Complete one copy of this for each Time Control

Time Control Name (Number): _____

Description: _____

System Searches for a match, sequentially starting at item 1

Item Number: _____

Start Time: _____ Mark active days for these hours:
MO TU WE TH FR SA SU
End Time: _____ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Action (the menu or mailbox calls are to go to):

Time Period Number: _____ (enter 1 to 9, for users to select time sensitive greetings)

Item Number: _____

Start Time: _____ Mark active days for these hours:
MO TU WE TH FR SA SU
End Time: _____ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Action (the menu or mailbox calls are to go to):

Time Period Number: _____ (enter 1 to 9, for users to select time sensitive greetings)

Item Number: _____

Start Time: _____ Mark active days for these hours:
MO TU WE TH FR SA SU
End Time: _____ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Action (the menu or mailbox calls are to go to):

Time Period Number: _____ (enter 1 to 9, for users to select time sensitive greetings)

Item Number: _____

Start Time: _____ Mark active days for these hours:
MO TU WE TH FR SA SU
End Time: _____ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Action (the menu or mailbox calls are to go to):

Time Period Number: _____ (enter 1 to 9, for users to select time sensitive greetings)

* Up to 10 items can be assigned to a Time Control - use additional sheets for more items.
Installation Form - Voice Lines Settings

	Action To Perform When Calls Ring In	Additional Parameters
Line 1	_____	_____
Line 2	_____	_____
Line 3	_____	_____
Line 4	_____	_____
Line 5	_____	_____
Line 6	_____	_____
Line 7	_____	_____
Line 8	_____	_____

D System Log and Error Messages

Introduction

The Digital Voice Processing System outputs two kinds of logs: error log and system activity (or call record) log. All logs are in ASCII format which allows printing or viewing them with simple DOS commands.

Log files record system events and provide an audit trail used by the administrator to analyze how the system is being used.

Error Log

The error log is output to a file named `HELLO.ERR`. Each line or record in this file contains four fields. The first field is the date the message was added to the log. The second field is the time. The third field is the channel (or line) number. If the channel number is zero the message is not linked to a particular channel. The rest of the log is text that describes the problem or error.

There are three error log messages that indicate system initiation and system termination as illustrated in the following sample:

```
04/28/95 13:51:21 00 010 Sys:Digital Voice Processing System M1
v7.16a SN: 000000 system reset (F=4).
04/28/95 13:51:21 00 010 Sys: D40DRV Version 3.20a
04/28/95 13:52:28 00 010 Sys:Digital Voice Processing System M1
v7.16a SN: 000000 system terminated(F=4).
```

The first two lines show the Digital Voice Processing System startup. The third line shows that the Digital Voice Processing System was brought down.

System Activity Log

The system log is comprised of separate files. Each day the Digital Voice Processing System runs, it generates a different file. The files are stored in the `C:\HELLO\LOGS` directory. The name of the file is `HEmmddyy.LOG`, where `mm` is the month, `dd` is the day, and `yy` is the year. For example, the log for May 7, 1995 is named `HE050795.LOG`.

The system log is more complicated than the error log. Every phone call that the Digital Voice Processing System takes generates a log line indicating what the caller did. The Digital Voice Processing System outputs system activity log lines similar to those found in the error log (see above).

Logging is a programmable feature, by default, the Voice Messaging, Auto Attendant, and Menu items are enabled. Other options can be enabled or disabled in programming.

In general, each log line has four fields. The first field is the time the log line was output. The next field is the channel (line) that output the line. A line number of 00 indicates a system message. The third field is the call start time. Not all lines contain this field. The fourth field is the message. A log message can be very simple or very complex. This document focuses on understanding the different log lines. Logs depend on the caller or mailbox owner decisions. The following sections discuss different logs and the meaning of each log item.

Each module (i.e., Voice Messaging...) has a letter code associated with it. Listed below are the current modules and the codes:

- Auto Attendant: [AutoA]
- Voice Messaging: [Vmail]
- Menu Routing: [Menu]

At the end of each log line you may see the letter H followed by a number. This means the Digital Voice Processing System detected that the caller had a hangup. The number indicates the type of hangup:

- H7 - Hangup packet from the phone system was received

If no H is listed, it means the caller selected to hangup by pressing a key, such as 9 from Voice Messaging maintenance. Each of the modules has different log information included after it. These are described individually with their corresponding code information.

Auto Attendant

AutoA. in the log represents the Auto Attendant function. After the AutoA is the extension the person dialed. Following the extension is the destination where the caller was sent. In most cases this is a call to an extension.

Extensions with supervised transfer have codes following the extension number. Possible codes are:

- Busy Ca
- NoAnswer Ca
- Connect (Call Answered)

If the call was answered, the transaction ends. If there was no answer the call was probably sent to the person's mailbox (see Voice Messaging below). In the case of Busy the caller may elect to retry the extension therefore, the call repeats. This example from the System Log illustrates how to read an Auto Attendant Log.

```
09:23:16 05 Log: AutoA 100 Call 100 Busy CaScHo
09:23:25 05 Log: AutoA 100 Hold Holding 1
09:23:46 05 Log: AutoA 100 Call 100 NoAnswer
09:23:46 05 Log: AutoA 100 To mailbox 100
```

Log Interpretation

This log is an example of someone calling for extension 100. The extension is busy as written in the first line. The abbreviations `CaScHo` stand for (Ca) Supervised Transfer, (Sc) Screening, (Ho) Holding. Basically, the supervised auto attendant transferred the call, it was screened and put on hold. The second line states that it was held only one time. The third line indicates the phone system tried the line again. The last line tells the phone system to go ahead and send the caller to mailbox 100.

Extensions with unsupervised transfer have the code `blXXXX` which stands for blind transfer followed by the extension number. Since the Digital Voice Processing System hangs up automatically after a blind transfer, the log line ends.

Voice Messaging

Voice Messaging log records are split into two general types. One type is for message taking; the other is for mailbox maintenance. General message taking is when an internal or external caller leaves a message for a mailbox. Mailbox maintenance is when an internal user is in their mailbox retrieving messages, changing personal options, etc.

There are a minimum of four lines that are created for a system log once a mailbox is opened. These lines represent what the system had to do so the caller could receive or give a message.

```
14:30:37 04 Log: Start Call
14:30:43 04 Log: Vmail 100 access
14:30:49 04 Log: Owner 100 VN:3 VS:8 PN:0 PS:2
14:30:55 04 Log: Stop Call 14:30:37
```

Log Interpretation

The first line of this Log states that a call started at 14:30:37 on line 04. The second line depicts the time and the extension the caller called. The third line shows the time and mailbox numbers with the associated abbreviations.

The abbreviations stand for:

VN — Voicemail New message
VS — Voicemail Saved message
PN — Pager New message
PS — Pager Saved message

Log users can tell how many messages are on a particular mailbox. In this example there were three new messages, eight saved messages, zero new pager messages, and two saved pager messages. The first line provides the call start time and the last line shows the time the message stopped.

Logs depend on caller or mailbox owner decisions. The general message taker is indicated in the log with the Vmail code. After the Vmail code is the mailbox number where the caller is sent.

Other Vmail log lines examples and their interpretation are:

```
14:30:43 04 Log: Vmail 100 to Owner
```

Mailbox 100 was accessed as an owner.

```
14:30:43 04 Log: Vmail 100 Voice Send to mb 101
```

Mailbox 100 recorded a message and sent it to mailbox 101.

```
14:30:43 04 Log: Vmail 100 Voice 0:00:20 K9
```

A caller left a 20 second voice message and terminated the call with the 9 digit.

```
14:30:43 04 Log: Vmail track msg: 100.IVX Play
```

Log Line for the message tracker logging option.

Menu Routing

Menu Logs

```
10:25:08 04 Log: Start Call
10:25:08 04 Log: Vmail 100 Access
10:25:27 04 Log: Menu Demo        10:25:08 Keys    2:MnSALESMNU
10:25:32 04 Log: Stop Call 10:25:08
```

The only difference between these logs and previous ones is the third line. This line describes which menu was picked (Demo), the time the call was made (10:25:08), the key the caller pressed for options (2), and where the option forwarded the caller (Salesmnu) when the menu finished prompting.

Other options include:

HgUp	Hang up the line
Oper	Transfer to the operator
Inst	Replay instructions
Menu	Run a menu
AutoA	Go to Auto Attendant
Vmail	Go to Voice Messaging
Disb	Disable key
Invd	Invalid key

Table D-1. Options

Error Messages

If an error occurs, the Digital Voice Processing System attempts to identify the cause of the error and provides information to help resolve the problem.

Error List

The following list summarizes the Digital Voice Processing System error messages and the probable cause of each error.

H!VMAIL Warning: Message type MssgType not supported.

H!VMAIL Error: No Last Option menu defined COS Name.

H!OWNER Error: Invalid password length.

H!OWNER Error: No prompt keys specified. Disconnecting.

H!DBASE Error: Unknown dBase command ModuleParameter.

H!DBASE Error: Unable to access KeyValue.

H!MENU Error: Invalid menu password.

H!NOTIFY Error: Invalid password length.

H!NOTIFY Error: No period in MbxOnline notify setting.

H!OWNERA Error: No prompt keys specified. Disconnecting.

H!OWNERO Warning: Nothing to edit at VoMenu8., returning.

H!OWNERO Error: No prompt keys specified. Disconnecting.

H!OWNERS Error: Called with no module parameter.

H!OWNERS Error: Invalid gMailboxLength.

H!OWNERS Error: Warning to open SYSLIST.DBF.

H!OWNERS Error: Unable to open address file for send.

H!OWNERS Error: No prompt keys specified. Disconnecting.

H!OWNERV Error: RunOwnerMenu failed on VoMenuRoot=11.

H!OWNERV Error: Unable to open address file for forward

H!OWNERV Error: Unable to open address file for send

H!OWNERV Error: Warning to open SYSLIST.DBF.

H!OWNERV Error: No prompt keys specified. Disconnecting.

H!OWNERX Warning: Nothing to edit at VoMenu6., returning.

H!OWNERX Error: No prompt keys specified. Disconnecting.

H!TIMECO Error: Start time invalid.

H!TIMECO Error: End time xxxxx invalid.

H!TIMECO Error: Time control in loop;.

H!AUTOA Error: Invalid gMailboxLength.

H!MSGMAN SetUp Error: No group 1 handlers for message manager.

H!MSGMAN Error: Event EvData not for Message Manager. Check event queues.

H!MSGMAN Error: Message Manager command.

H!MSGMAN Error: Unable to open.

H!MSGMAN Error: Personal list #.

H!MSGMAN Error: No room in guest mailbox.

H!MSGMAN Error: Return receipt needs source.

H!MSGMAN Error: Unable to open.

H!MSGMAN Error: File names wrong for rename.

H!MSGMAN Error: Broadcast file mData not found.

H!MSGMAN Error: Broadcast file mData bad name.

H!MSGMAN Error: Broadcast file mData bad name.

H!COMFIL Error No command file specified.

H!COMFIL Error File not found FileName.

System Errors

The following is a list of system errors detailing the actual error message followed by an explanation. These error messages are shown for reference only, since they appear infrequently, if at all. However, this list may be helpful to programmers or developers who design their own systems or applications.

000 Sys: *Channel Init Error (code=%d)*

Error initializing channel parameter block. Low level software/hardware problem.

000 Sys: *Invalid Line(%d) In Event(code=%d,data=%d)*

Error received from voice driver. Low level hardware/software problem.

000 Sys: *No Memory for System Var *

Unable to complete system variable loading from `HELLO.SDF`. Not enough free memory before running `HELLO`.

000 Sys: *Not enough disk (%ldK) to output*

Unable to produce normal output (logs, recordings, etc.) during `HELLO` operation. Not enough free disk space before running `HELLO`.

000 Sys: *Not enough disk (%ldK) to run*

Unable to produce critical output (error log, etc.). Not enough free disk space before running `HELLO`.

000 Sys: *System Var already defined*

Duplicate system variable names found while loading HELLO.SDF.HELLO configuration error (via MAINT).System Errors.

000 Sys: *Too Many System Vars (%d) for *

More system variables in HELLO.SDF than HELLO can store. HELLO limit reached. (maximum 50 system variables).

000 Sys: Critical Error Count = %d

Hourly log message indicating how many DOS critical errors trapped by optional error handler. Not an error by itself, but does indicate some system errors.

000 Sys: New Years Day!

Log message indicating New Year rollover. Not an error.

001 Sys: (%s) * Invalid Port = %d *

Invalid comm port specified in RS232 operation. Module error.

001 Sys: (%s) * Port %d Already Locked by %d *

Comm port already locked by other line. Not an error, just competition for ports.

001 Sys: (%s) * Port %d NOT Locked (%d) *

Comm port not locked as expected. Module error.

001 Sys: (%s) * Port %d NOT Open *

Comm port not open as expected. Module error.

001 Sys: (Close) *Port %d LOCKED by line %d*

Comm port locked by other line during close. Not an error, just indicates multiple lines accessing comm port.

001 Sys: (Open) *Port %d Already Opened by line %d*

Comm port already open during another open operation. Module error.

001 Sys: *Open error %d on port %d*

Error opening comm port for operations. Low level software (LCOM) or hardware error.

002 Sys: *No mem - Alloc Lengths List (n=%d)*

Error allocating module variable lengths list. Not enough free memory before running the Digital Voice Processing System.

002 Sys: *No mem - Alloc Value * (c=%d,n=%d)*

Error allocating module variable. Not enough free memory before running the Digital Voice Processing System.

002 Sys: *No mem loading constants (c=%d,n=%d)*

Error allocating module constants. Not enough free memory before running the Digital Voice Processing System.

002 Sys: *No mem loading instructions (n=%d)*

Error allocating module instruction code. Not enough free memory before running the Digital Voice Processing System.

002 Sys: *No mem-Alloc Value List (n=%d)*

Error allocating module variable value list. Not enough free memory before running Digital Voice Processing System.

002 Sys: *No Memory Allocating User Q *

Error allocating user queue. Not enough free memory before running the Digital Voice Processing System.

003 Sys: * Stack Overflow *

Too many nested subroutine calls. The Digital Voice Processing System limit reached. (maximum 10 nesting levels).

003 Sys: * Stack Underflow *

Too many subroutine returns. Module error, number of returns must match calls.

003 Sys: *Invalid function %d *

Unrecognized function code in module. Module file error or internal Digital Voice Processing System error.

003 Sys: *Invalid opcode %d*

Unrecognized instruction code in module. Module file error or internal Digital Voice Processing System error.

003 Sys: *Mark Dead scr=%d addr=%d mark=%2X l=%d v

Internal marker overwritten. Internal Digital Voice Processing System error.

003 Sys: *String Overflow(cat) d_max=%d d_len=%d s_len=%d

Attempt to set variable to a value that is too long. Module error.

003 Sys: *String Overflow(sv) d_len=%d d_max=%d s_len=%d

Attempt to set variable to a value that is too long. Module error.

003 Sys: *Task Mssg(%d,%s) BEFORE Answer*

Unprocessed message received from other task thrown away prior to going into answer mode. Module error, modules for multi-tasking systems should process all messages received prior to going into answer mode.

003 Sys: LineDown = %d*

Log message indicating a line was shut down by module command. Not an error.

004 Sys: * Can't concat sys segment (too many)*

Error concatenating voice segments from the system voice file (hellosys.vox). The Digital Voice Processing System limit reached. (maximum 30 segments) Probably too large too large a number in SayNumber or SayMoney, too long a string in SayChars, etc.

004 Sys: * Can't find sys segment *

Unable to find a voice segment in system voice file (HELLOsys.vox). Missing file or module error.

004 Sys: * Can't find voice message :%s/%s *

Unable to find a voice file. Missing file or module error.

004 Sys: * Can't open voice index (memory) *

Unable to successfully open a permanent voice index, due to insufficient memory for segment table. Not enough memory before running the Digital Voice Processing System.

004 Sys: * Invalid Definition #%d in Voice Index *

Error reading segment information from VDX file. Indicates error in VDX file format.

004 Sys: * No Segments in Voice Index *

No segments found in VDX file. Indicates empty VDX file.

004 Sys: * System voice file :%s not voxopen for %s(%s) *

Unable to play system segments because system voice file is not VOXOPEN in HELLO.SDF or HELLO.LOD. Configuration error (via MAINT) of HELLO.SDF or HELLO.LOD.

004 Sys: * Voice file :%s not found *

Unable to find a voice file for VOXOPEN. Missing file or configuration error (via MAINT) of HELLO.SDF or HELLO.LOD.

004 Sys: * Voice file already open *

Unable to VOXOPEN voice file, already open. Configuration error (via MAINT) of HELLO.SDF or HELLO.LOD.

004 Sys: * Voice index :%s not found *

Unable to open VDX file to find segment. Missing file or module error.

004 Sys: *Call error (c=%d)*

Error attempting to make an outbound call. Low level software/hardware error.

004 Sys: *Can't open record voice file *

Error opening record file for recording. The Digital Voice Processing System internal error or DOS file sharing error.

004 Sys: *Can't record :%s (in use)*

Error opening record file for recording. File is already open by another line.

004 Sys: *Can't record (disk space)*

Error recording file. Not enough disk space to record.

004 Sys: *Dial error (c=%d)*

Error attempting to make a outbound dial. Low level software/hardware error.

004 Sys: *DTMF Overflow (act=%d max=%d)*

Too many DTMF digits read into variable. Internal Digital Voice Processing System error.

004 Sys: *GetDTMFs (%d,%d,%s) err=%d*

Error attempting to make a DTMF read. Low level software/hardware error.

004 Sys: *Invalid VoxDate *

Error saying date. Invalid date data or module error.

004 Sys: *Play file /%s (%d:%d) error %d*

Error playing file. Low level software/hardware error.

004 Sys: *Record file (%d) error %d*

Error recording file. Low level software/hardware error.

004 Sys: *System Error %d:%d st=%d fh=%d *

Critical DOS error. Low level software/hardware error.

004 Sys: *Var too small(%d) for READDTMF(%d)*

Variable for read DTMF is smaller than requested length. Module error.

005 Sys: *Can't %s - mbox locked by line %d*

Unable to perform specified operation on mailbox, because it is locked by another line. Module error.

005 Sys: *Can't %s - mbox not open*

Unable to perform specified operation mailbox, because line does not have it opened. Module error.

005 Sys: *Can't create for mbox - create error*

Error creating deleted message file. Internal Digital Voice Processing System or DOS error.

005 Sys: *Can't delete for mbox - del error %d*

Error deleting message file. Internal Digital Voice Processing System or DOS error.

005 Sys: *Can't delete for mbox - not exist*

Error deleting message file, file does not exist. Module error.

005 Sys: *Can't open mbox - maximum open*

Unable to open mailbox, mailbox table is full. The Digital Voice Processing System limit reached. (maximum 32 mailboxes open).

005 Sys: *Can't say for mbox - not exist*

Error playing mailbox message file, file does not exist. Module error.

005 Sys: *Dup file len(%ld) mismatch on mbox*

Error in indirect message file length. Internal Digital Voice Processing System error.

005 Sys: *Mbox Reset %d Count Mismatch (%d%d)*

Message counts in MDX and directory differ. Missing files or Digital Voice Processing System internal error.

005 Sys: *No Dest mbox to dup from mbox*

Nonexistent mailbox specified. Module error.

005 Sys: *No Disk Space to dup to mbox *

Unable to duplicate mailbox message. Not enough free disk space before running the Digital Voice Processing System.

005 Sys: *TC(%s) Mbox Count %d Mismatch (%d%d)*

Message counts in MDX and directory differ. Missing files or Digital Voice Processing System internal error.

005 Sys: *TC(%s) unable to read mbox %d index*

Error reading mailbox index entry. Internal Digital Voice Processing System error.

005 Sys: *Unable to Del mssg; %d(%ld) %d (ec=%d)*

Error deleting short message just recorded. Internal Digital Voice Processing System or DOS error.

005 Sys: *Unable to dup from to (create)*

Error creating new message file for mailbox. Message directory full, Internal Digital Voice Processing System or DOS error.

005 Sys: *Unable to open for dup to mbox *

Error opening mailbox message file. Internal Digital Voice Processing System or DOS error.

005 Sys: *Unable to open file for mbox *

Error opening mailbox message file. Internal Digital Voice Processing System or DOS error.

005 Sys: *Unable to say indirect mssg for *

Error playing indirect mailbox message file. Low level software/hardware or Internal Digital Voice Processing System error.

005 Sys: Del mssg; %d(%ld) %d

Log message reporting the deletion of a newly recorded mailbox message that was shorter than the minimum recording length. Not an error.

006 Sys: *Can't open - maximum files*

Unable to open file, maximum number of files open. The Digital Voice Processing System limit reached. (maximum 16 files).

006 Sys: *Can't say :%s/%s to file (%d)*

Error saying into file, file not opened for write or file not opened in binary mode. Module error.

006 Sys: *File not opened for write*

Error writing to file, file not opened for write. Module error.

006 Sys: *FRead too long(%d) for dest(%d)*

Error reading into variable, specified read length longer than variable. Module error.

006 Sys: *FSearch too long(%d) for dest(%d)*

Error file searching into variable, specified length longer than variable. Module error.

006 Sys: *No Disk Space to open output file *

Unable to open file for output. Not enough free disk space available.

006 Sys: *No Disk Space to say to file *

Unable to say into file due to insufficient disk space. Not enough free disk space available.

006 Sys: *No Disk Space to write to file *

Unable to write to file due to insufficient disk space. Not enough free disk space available.

006 Sys: *Unable open file ; name too long*

Unable to open file, filename is too long. Module error.

006 Sys: *Unable to open dest file :%s to copy*

Error creating destination file to copy to. File already open or DOS error.

006 Sys: *Unable to open source file :%s to copy*

Error opening source file to copy from. Missing file or DOS error.

007 Sys: *Database %d not opened during %s*

Database not open as expected for dBase operation. Module error.

007 Sys: *Error=%d on field val file during DbaseFreplace*

Error replacing field value, usually invalid field name or value conversion. Module or database error.

007 Sys: *Index %d not opened during %s*

Index not open as expected for dBase operation. Module error.

007 Sys: *Invalid field for file during DbaseFstr*

Error referencing field value, usually invalid field name or value conversion. Module or database error.

007 Sys: *Invalid field val for file during DbaseFReplace*

Error replacing field value, usually invalid field name or value conversion. Module or database error.

007 Sys: *No Current Record(%ld) in db during %s*

No database record selected as expected. Module error.

007 Sys: *Unable to alloc buffer(%d) for dbase*

Unable to allocate record buffer during dBase open. Not enough free memory available.

007 Sys: *Unable to alloc buffer(%d) for index*

Unable to allocate index buffer during index open. Not enough free memory available.

007 Sys: *Unable to GO to rec=%ld in dbase; Error=%d*

Error during go operation, probably invalid record number. Module or database error.

007 Sys: *Unable to open dbase; Error=%d*

Error during dbase open operation. Missing database file, module error, or database error.

007 Sys: *Unable to open dbase; Invalid filename*

Unable to open database, invalid filename. Module error.

007 Sys: *Unable to open dbase; Max_dbs(%d)*

Unable to open database file, maximum already open. The Digital Voice Processing System limit reached. (maximum 4 databases)

007 Sys: *Unable to open index for db; opened for db*

Unable to open index file with currently selected database, that index already opened with another database file. Module error.

007 Sys: *Unable to open index; Error=%d*

Error opening index file. Missing file, module error, or database error.

007 Sys: *Unable to open index; Invalid filename*

Unable to open index file, invalid filename. Module error.

007 Sys: *Unable to open index; maximum indices(%d)*

Unable to open index file, maximum already open. The Digital Voice Processing System limit reached. (maximum 4 indices).

007 Sys: *Unable to open index; No database selected*

Unable to open index, must have database open and selected. Module error.

007 Sys: *Unable to write rec=%ld in dbase; Error=%d*

Error writing database record. Module or database error.

009 Sys: * QRec=%d during %s (hl=%d fl=%d) *

Invalid user queue record number during operation. Internal Digital Voice Processing System error.

009 Sys: * Queue file length = %ld *\n

Invalid user queue file length. Internal Digital Voice Processing System error.

010 Sys: * Not Enough Memory* (%ld)

Unable to perform operation due to insufficient free memory. Not enough free memory available.

010 Sys: Digital Voice Processing System v%d.%02d system reset (F=%d).

Log message indicating the startup of Digital Voice Processing System. Not an error.

010 Sys: Digital Voice Processing System v%d.%02d system terminated (F=%d).

Log message indicating the termination of Digital Voice Processing System. Not an error.

010 Sys: MEMORY U[%ld] F[%ld] D[%ld] : %s

Log message indicating the amount of used and free memory. Not an error.

011 Sys: Blockage Cleared Group# %d

Log message indicating that blockage no longer exists for a particular blockage group. Not an error.

011 Sys: Blockage Detected Group# %d

Log message indicating that blockage has begun for a particular blockage group. Not an error.

011 Sys: Trans to IDLE (cs=%d ev=%d ed=%d)

Error message indicating a transition to the IDLE processing state for a line. Internal Digital Voice Processing System error.

014 Sys: Closing file :%s (f#%d)

Log message indicating the closing of a file. Not an error.

014 Sys: Opening file :%s (f#%d)

Log message indicating the opening of a file. Not an error.

??? Sys: *Invalid Key :%d Type (%d)*

Error in key value type. Low level software/hardware problem.

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